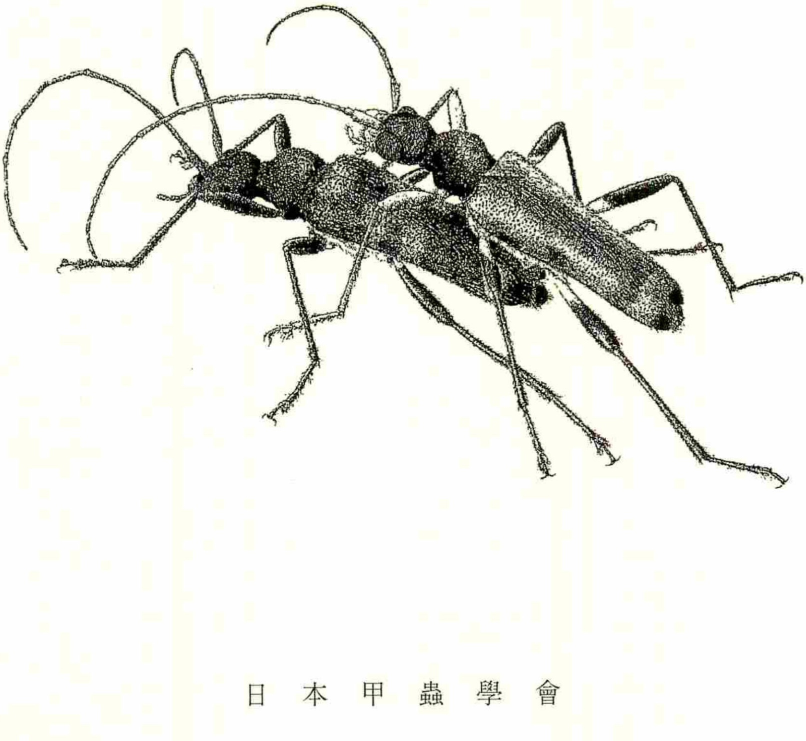
ISSN 0286-9810

Vol. 54 No. 1 June 30, 1999

昆蟲學評論

THE ENTOMOLOGICAL REVIEW OF JAPAN



日 本 甲 蟲 學 會

THE JAPAN COLEOPTEROLOGICAL SOCIETY
OSAKA

The Japan Coleopterological Society

(Founded in 1945)

Managing directors: Yasuhiko Hayashi, Kozo Mizuno, Hideyo Nomura,
Tateo Ito, Fumiaki Kimura, Shigehiko Shiyake

Editorial Board

Katsura Morimoto (Chairman), Kôhei Sawada, Takashi Kishii
Hiroyuki Sasaji, Nobuo Ohbayashi, Masahiro Sakai,
Yasuhiko Hayashi, Noboru Ito

Councilor

Hiroshi Kono, Yoshihiko Kurosawa,, Shun-ichi Uéno
Tikao Ohkawa, Sadanari Hisamatsu, Shinsaku Kimoto

運営委員　林　靖彦，水野弘造，野村英世，伊藤建夫
　　　　　木村史明，初宿成彦
編集委員　森本　桂，澤田高平，岸井　尚，佐々治寛之，大林延夫
　　　　　酒井雅博，林　靖彦，伊藤　昇
評 議 員　河野　洋，黒澤良彦，上野俊一，大川親雄
　　　　　久松定成，木元新作

The Entomological Review of Japan is published biannually by the Japan Coleopterological Society. We are glad to exchange any publications relating to the study of entomology.

Annual subscription is ¥5,000 for individual members.

Business Office
The Japan Coleopterological Society
c/o Entomological Labolatory
Osaka Museum of Natural History
Nagaikôen 1-23, Higashisumiyoshi-Ku
Osaka , 546-0034 JAPAN
URL - http://www.mus-nh.city.osaka.jp/jcs.html

Printed by
Naniwa Insatsu Co. Ltd., Osaka, Japan

Ent. Rev. Japan, 54 (1): 1-4, June 30, 1999

A New Species of the Genus *Ampedus* DEJEAN (Elateridae, Coleoptera) from Wakayama Prefecture

Some New Forms of Elateridae in Japan (XXIX)

By TAKASHI KISHII
Kamihamuro 1-10-6-410, Takatsuki C., Osaka, 569-1044 Japan

Abstract A new species belonging to the elaterid genus *Ampedus* is described from Kushimoto in Wakayama Prefecture, Japan, under the name of *Ampedus* (*Ampedus*) *motoshigei*.

Key words: Taxonomy; new species; Elateridae; Coleoptera; Japan.

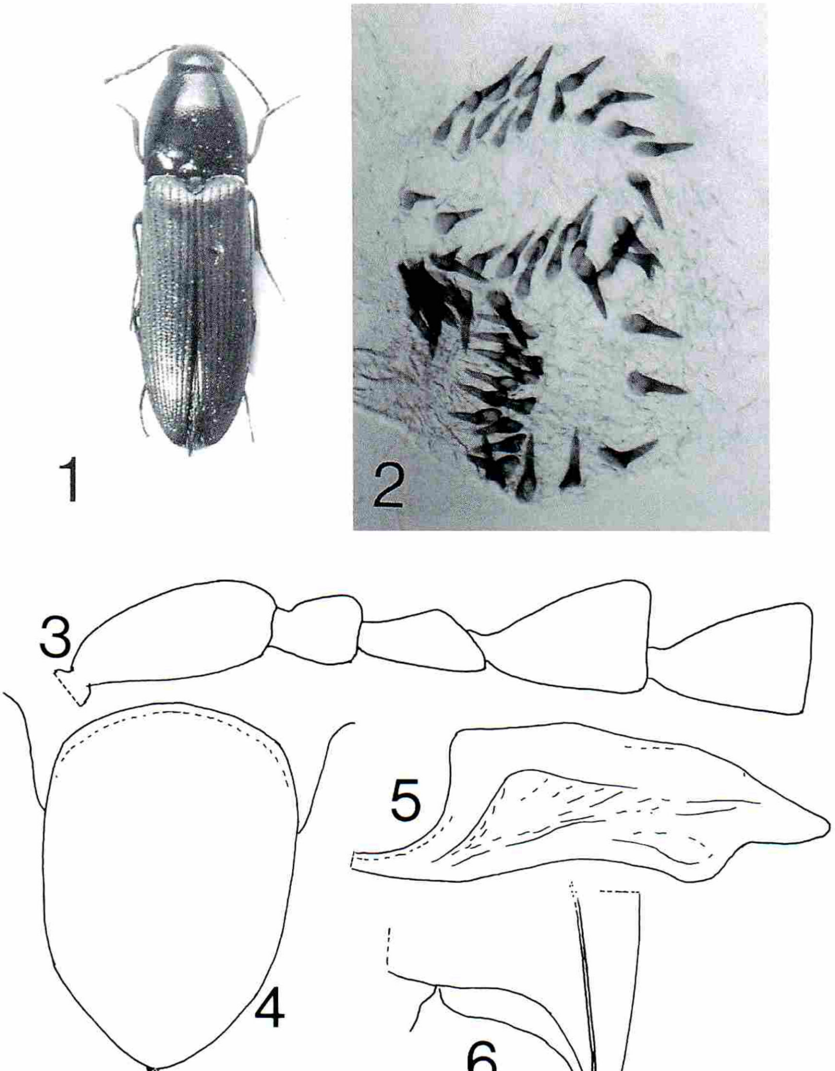
Up to the present time about 130 species of the genus *Ampedus* DEJEAN,1833 have been known from Japan, and those are divided into four subgenera. The subgenus *Ampedus* includes a largest number of species in Japan and is again split up into some species-groups. In this paper, I am going to describe *A.* (*A.*) *motoshigei* sp. nov. from Kushimoto Town in Wakayama Prefecture through the courtesy of Mr. MOTOSHIGE YOSHIDA of Yura-cho in Wakayama Prefecture, a membership of the Japan Coleopterological Society. The new species belongs in the red-elytral group represented by *A. orientalis* LEWIS.

Ampedus (*Ampedus*) *motoshigei* KISHII sp. nov. (Figs. 1-6)

Female. Length: 10.68 mm and width: 3.00 mm.

Body elongate, rather robust, parallel-sided from the middle of pronotum to beyond the middle of elytra, nearly flat medially on dorsum, distinctly shiny all over, densely and wholly covered with erect pubescence rather short and black; entirely black, elytra reddish with basal margins narrowly and apices triangularly infuscate, 2nd and 3rd joints of antenna brownish at apex, and legs more or less dark brownish.

Head wide, rather roundly convex above between eyes, then gradually declivous anteriorly; relative median width of vertex and each eye in dorsal view as 94:16 (ca. 5.9 times) ; frons feebly and roundly elevated, slightly declivous and roundly expanded anteriad at the middle, a little depressed along frontal edge, with anterior margin clearly defined wholly and conspicuously carinate and a little upheaved before eyes; frontal groove absent at the middle and anterior margin of frons entirely conglutinate with inferior edge of head at the middle; antennal sulci large, subtriangular, shallowly excavated and generally smooth; vertex even, with punctures rather small, rather dense but more or less irregular in density and size, and their interstices a little wider in average than diameters of punctures; eyes large and moderately prominent laterad; labrum remarkably and roundly convex, transversely elliptical, faced anteriad, wholly micro-sculptured, with rather dense and asperate punctures. Antennae (apical 2 joints of right antenna and 3 of left lost) not so thick, perhaps near equal to length of head and prothorax



Figs.1-6. *Ampedus* (*Ampedus*) *motoshigei* KISHII sp. nov. : 1, habitus, holotype, ♀; 2, prickles on bursa copulatrix; 3, right antenna, 1st to 5th joints; 4, scutellum; 5, prosternal process in profile; 6, right hind angle of pronotum.

combined; relative length/width of basal 5 joints each as 28/14, 14/11, 19/11, 28/19 and 23/19 (Fig.3); basal joint massive, cylindrical and more or less expanded at anterior border, 2nd subglobular, 3rd oblong triangular, and 4th to 9th plainly serrated.

Pronotum subtrapezoidal, parallel-sided in posterior half, gently and roundly narrowed anteriad in anterior half, about as wide as long, simply and roundly convex, without any median line or depression; sides entirely marginate and a little sinuate before hind angles; hind angle (Fig,6) straightly protruding posteriad but not so elongate as usual, not divergent, with an acute carination; disc even, similarly punctured as well as on vertex but more or less sparser and rather regular.

Scutellum (Fig.4) tongue-shaped, simply flattened, a little declivous anteriorly, nearly rounded at anterior edge and feebly elevated, with punctures exceedingly finer and sparser than those on pronotum.

Elytra not elongate, 2.28 times as long as wide, a little more than 2.8 times the median length of pronotum, nearly as wide as pronotum, parallel-sided and widest at basal 3/4; dorsum longitudinally elevated along the middle and highest near the middle, not elevated at anterior end of suture behind scutellum; striae clearly and narrowly grooved, with distinct and rather dense punctures; intervals flattened, remarkably finely and sparsely punctate; apices moderately ended.

Prosternum fairly wide, subquadrate, feebly narrowed near the middle, longitudinally elevated ventrally along the middle, widest at anterior angles, a little expanded at posterior ends before procoxal cavities; surface wholly glabrous, with punctures distinctly sparser and a little larger than those of pronotum; anterior lobe narrow, slightly declivous, with a transverse depression behind anterior margin and a narrow transverse concavity behind lobe. Prosterno-pleural sutures a little divergently extending anteriad, duplicated at pleural sides, clearly furrowed at frontal ends, and generally smooth on whole surface. Prosternal process in profile (Fig.5) narrow, curved inwards behind procoxae, then horizontally extending in apical half, apex triangularly prominent posteriorly, having a small excavation before apex at ventral side and shaped as a small mucro. Propleural punctures plainly larger and denser than those of pronotum and more or less longitudinally ovate. Mesosternal groove oblong-rhombic, oblique and depressed at anterior half. Metasternal punctures generally similar to those of pronotum, but a little larger and evener in size and density. Legs moderate in size.

Prickles of bursa copulatrix as figured (Fig.2) ca. 60 in number, long, thick and distinctly acute with each base widened.

Male unknown.

Holotype,♀, Satono in Kushimoto Town, Wakayama Prefecture. 18. I. 1992, M. YOSHIDA leg. (Preserved in the collection of Osaka Museum of Natural History).

Remarks: This new species closely resembles *A.* (*A.*) *tsugaru* KISHII, 1992 from Mt. Iwaki-san in Aomori Prefecture, but is distinguished from the latter by the following points: body smaller in size; 3rd antennal joint narrower; pronotum subtrapezoidal; hind angles of prothorax parallel-sided to each other and not divergent, and the punctures plainly smaller and sparser; scutellum a little narrower; strial punctures of elytra larger and more definitely punctate; prosternaal punctures smaller and sparser; apex of prosternal process more elongate and protruding, and prickles on bursa copulatrix a little robuster.

In the general appearance of the prickles on bursa copulatrix and the shape of each prickle, this new species is also allied to *A. orientalis* and *A. fagi* of LEWIS (1894), but both of the latter species have usually fulvous pubescence, entirely reddish elytra without infuscate apices and reddish brown legs.

要　　約

岸井尚：和歌山県串本町産の*Ampedus*属の1新種．―*Ampedus*属はコメツキムシの中でも最も分化の激しいもののようで，ヨーロッパからロシア沿海州までの地域で既に80種以上が知られ，更に本邦でもこれまでに130種の記録を見る大群で，4亜属に分けられるが，*Ampedus*亜属がその大

部分を占める．本稿で記載した*A. motoshigei* は *A. tsugaru* Kishiiに類似するが，体形と雌貯精嚢内の刺状構造の違いで区別は困難でない．和名新称キイアカコメツキ．新名は採集者の吉田元重氏に因む．

Reference

Kishii, T., 1992. Notes on Elateridae from Japan and its adjacent area (11). *Bull. Heian High School,* 36: 1-30.

(Received Sept. 22, 1998: Accepted March 30, 1999)

Ent. Rev. Japan, 54 (1): 5-9, June 30, 1999

A Study on the Elaterid Beetles of SHIBATA Collection from Taiwan, VII (Coleoptera, Elateridae)
On the Subfamily Elaterinae: Tribe Dicrepidiini

By TAKASHI KISHII
Kamihamuro 1-10-6-410, Takatsuki C., Osaka, 569-1044 Japan

Abstract Four species of the tribe Dicrepidiini in the Subfamily Elaterinae are reported from Taiwan, of which one is described as *Sephilus shibatai* sp. nov. Also *Sphenomerus brunneus* CANDÈZ is newly recorded from Taiwan.

Subfamily **Elaterinae**
Tribe Dicrepidiini

Sephilus formosanus SCHWARZ, 1902 (Fig.1)

Sephilus formosanus SCHWARZ, 1902, Dt. ent. Z.: 319 & 320 (Formosa).

Specimens examined: 3♂♂, Lienhwachi, Nantou Hsien, 29. VI. 1972, Y. MAEDA leg.; 1♂, Liukuei, Kaohsiung Hsien, 26. VII. 1970, T. KOBAYASHI leg.; 1♂, Shimen Reservoir, Taoyuan Hsien, 27. VII. 1970, T. KOBAYASHI leg.

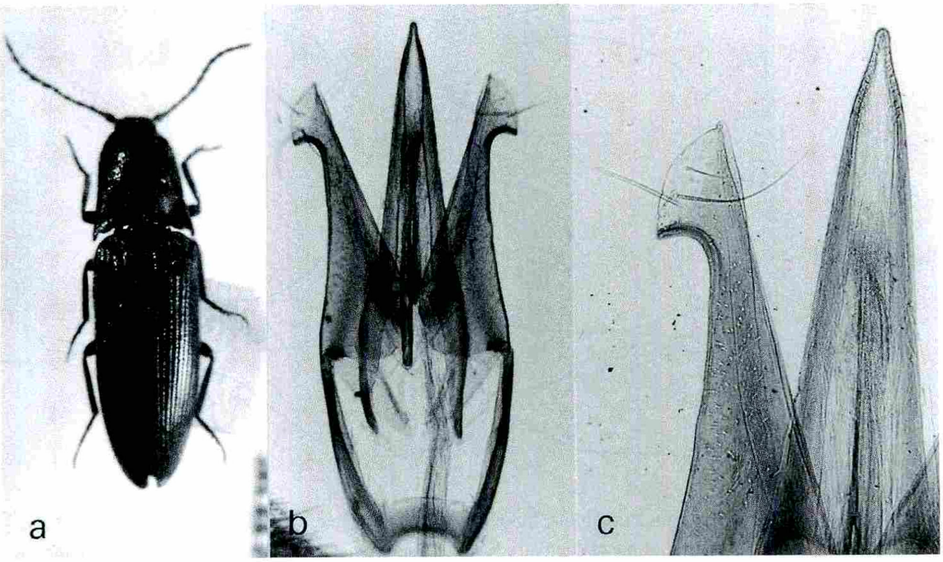


Fig.1. *Sephilus formosanus* SCHWARZ, 1902: a, habitus, ♂; b, male genitalia (6306); c, ditto.

Sephilus shibatai KISHII sp. nov. (Fig.2)

Sephilus formosanus: KISHII, 1991, Trans. Essa ent. Soc., Niigata, 71: 6, Figs. 17 & 37 (Mt. Senpei near Liukuei), part., nec SCHWARZ,1902.

Male. Length: 10.68-11.16 mm and width: 2.88-3.12 mm. Female, length: 14.64 mm and width: 3.84 mm.

Body distinctly robust, elliptical, subcylindrical, longitudinally elevated above as well as below in the middle, parallel-sided, rather subopaque on dorsum but plainly shiny on abdomen;

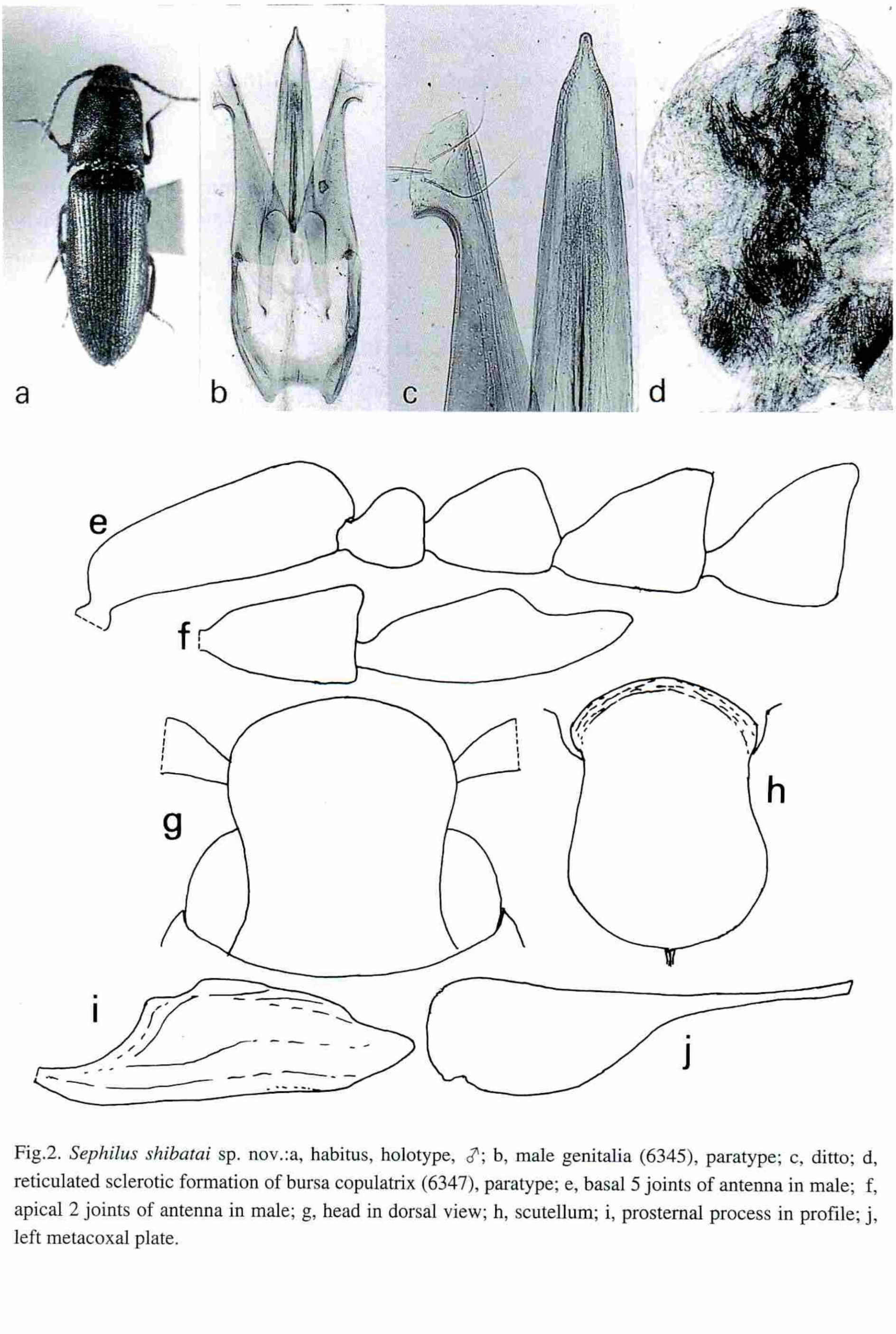


Fig.2. *Sephilus shibatai* sp. nov.:a, habitus, holotype, ♂; b, male genitalia (6345), paratype; c, ditto; d, reticulated sclerotic formation of bursa copulatrix (6347), paratype; e, basal 5 joints of antenna in male; f, apical 2 joints of antenna in male; g, head in dorsal view; h, scutellum; i, prosternal process in profile; j, left metacoxal plate.

entirely reddish brown, antennae, legs and ventral surface more or less pale, pubescence not so long, tender, rather dense, erect and pale yellow, with clear tint.

Head subquadrate, narrowest at hind part and widened laterally before eyes, a little longer than wide, feebly and roundly elevated before pronotum, declivous anteriorly, sometimes with a pair of short longitudinal depressions behind the frons; relative median distance between eyes and each eye width in dorsal view as 100:18 (ca. 5.6 times); frons (Fig.2-g) plainly decli-vous and expanded antero-inferiad, anterior margin rounded, obviously and definitely carinate and extending ahead like a penthouse; frontal groove faced antero-inferiad, remarkably broad, shallowly excavated, scabrously sculptured throughout by dense and large asperate punctures, antennal sulcus at each lateral end entirely circular and shallowly hollowed; discal punctures conspicuously large, dense, perfectly umbilicate, reticulately arranged and generally irregular in size. Eyes large and spherical but not so prominent outwards as usual. Labrum rather small, transversely elliptic, faced ahead, feebly convex, with punctures small, dense and rather coarse.

Antennae subequal in length to length of head and prothorax combined in male and distinctly shorter in female; relative length/width of basal 5 joints as 48/21, 14/14, 25/21, 26/25 and 25/28 in sequent from 1st joint (Fig.2-e); basal joint massive and widened apicad, 2nd subglobular, 3rd to 10th plainly serrated, 5th to 11th gently becoming narrower apicad, and 11th elongate, ca. 1.8 times as long as 10th and obviously emarginate at antero-apical side (Fig. 2-f).

Pronotum quadrate, a little longer than wide, parallel-sided, roundly and plainly convex above, without any median line or depression but having an obscure longitudinal median furrow only on basal slope; hind angles thick, rather short, perfectly parallel to each other and not divergent postero-laterally at apices, each apex with a clear short and straight carina; basal furrows very small and plainly notched; discal punctures more or less similar to those of head in shape, size and density.

Scutellum (Fig.2-h) subquadrate, wholly flattened, slightly declivous anteriorly, roundly expanded ahead at anterior edge and having many small transverse creases along it, feebly constricted at lateral sides behind anterior corners, slightly widened at posterior corners and entirely rounded at hind edge, distinctly finely and sparsely punctured on disc, and entirely smooth on their interstices of the punctures.

Prosternum elongate, plainly widened at anterior corners as well as posterior ones, narrowest before procoxal cavities, longitudinally and distinctly elevated below along the middle from behind anterior lobe to between procoxae, more or less similarly punctate as those on pronotum, but the punctures are a little more coarse and irregular in density; anterior lobe semicircular, strongly declivous anteriorly, transversely depressed at base, clearly and roundly expanded inferiad, definitely marginated at edge, much more densely punctured than on sternal disc. Prosterno-pleural furrows nearly straight, obviously deep and wide, with outer margins remarkably carinated and upheaved ventrally, and closed before procoxal cavities at four-fifths length of prosternal sutures. Prosternal process in profile (Fig. 2-i) elongate, rather narrow, gently bent inwards behind procoxal cavities and rather straightly extending posteriad, with apex rather obtusely pointed. Propleural puncturs similar to those of prosternal disc but gradually becoming sparser and smaller posteiad. Mesosternum broadly and circularly concave at the middle, sparsely and obscurely ocellato-punctate, with a distinct narrow groove triangularly extending at anterior end, subparallel-sided near the middle, and a little divergent postero-laterad at hind end. Metasternal punctures smaller and sparser than those on propleuron, and generally ill-ocellated or partly simple. Metacoxal plate (Fig.2-j) obviously narrowed at lateral half.

Legs thick, with 2nd and 3rd tarsal segments elongate-lobed at apico-inferior apices.

Male genitalia as figured (Fig.2-b, c); apico-lateral expansion of each paramere plainly rounded at outer margin and as long as wide; reticulate sclerotic formation of female bursa copulatrix as figured (Fig.2-d).

Holotype: ♂, Kenting Park, Pingtung Hsien, 23. V. 1970, T. KOBAYASHI leg. (Preserved in the collection of Osaka Museum of Natural History). Paratypes: 1♀, Kenting Park, Pingtung Hsien, 14. VIII. 1969, 1♂, Ditto , 14. VI. 1971, 1♂, Ditto ,15. VI. 1971, 2♂♂, Ditto , 3. VIII. 1972, 1♂, Ditto, 22. V. 1970, at light, Y. MAEDA leg.; 1♂, Ditto, 23. V. 1970, Y. KIYOYAMA leg. Senpei near Liukuei, Kaohsiung Hsien,1♂, 4. VIII. 1989, K. BABA leg.

Sephilus shibatai sp. nov. is closely allied in general appearance to *S. formosanus* SCHWARZ, 1902 cited above , but the antennae are clearly shorter, the 3rd antennal joint is ca. 1.8 times as long as 2nd whereas in *formosanus* ca. 2.8 times or more, pronotal hind angles are subparallel-sided mutually and not divergent latero-posteriad, and the median lobe of aedeagus is wider and the apex suddenly narrowed.

Sphenomerus takasago KISHII, 1991 (Fig. 3)

Sphenomerus takasago KISHII, 1991, Trans. Essa ent. Soc., Niigata, 71: 6 & 13-15, Figs. 6, 18 & 39 (Chingta Shan near Too-nah in Taiwan).

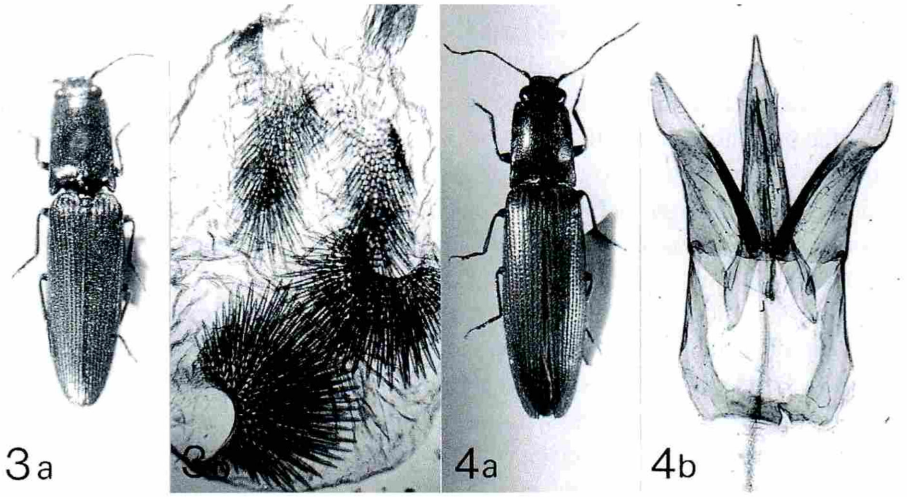
Specimen examined: 1♀, Funchifo, Chiai Hsien, 20. VII. 1970, T. KOBAYASHI leg.

Sphenomerus brunneus CANDÈZE, 1864 (Fig. 4)

Sphenomerus brunneus CANDÈZE, 1864, Elat.nouv.1: 22 (Siam).

Specimen examined: 1♂, Funchifo, Chiai Hsien, 15. VII. 1972, Y. MAEDA leg., at light.

This species is newly recorded from Taiwan. Up to the present it had been known from



Figs.3 & 4. *Sphenomerus* species. 3. *Sphenomerus takasago* KISHII, 1991: a, habitus, ♀; b, sclerotic formation on bursa copulatrix (6848). 4. *S. brunneus* CANDÈZE, 1864: a, habitus, ♂; b, male genitalia (6372).

Indochina to the Malay Peninsula.

要　　約

岸井 尚：芝田コレクション台湾のコメツキムシ, VII. — 芝田太一氏コレクションの第7報として，*S. shibatai* sp. nov. を記載すると共に，*Sephilus formosanus*, *Sphenomerus takasago*, *S. brunneus* を含むヒラアシコメツキ族の2属4種を記録した．*Sephilus shibatai* は *S. formosanus* に似るが，触角が短く前胸後角が互いに平行で側方に広がらない．また，*Sphenomerus brunneus* は台湾初記録である．

Literature Cited

KISHII, T. 1991. Elateridae from Taiwan, with descriptions of some new taxa (5) (Coleoptera). A study of the materials collected by Dr. Kintaro BABA from 1986 to 1989. *Trans. Essa ent. Soc., Niigata*, (71): 3-32.

(Received Sept. 22, 1998: Accepted March 30, 1999)

Ent. Rev. Japan, 54 (1): 11-19, June 30, 1999

Notes on the Chinese Elateridae (Coleoptera) (4)*

By

TAKASHI KISHII
Kamihamuro 1-10-6-410, Takatsuki C., Osaka, 569-1044 Japan

and

SHI-HONG JIANG
Laboratory of Insect Systematics, Department of Plant Protection,
Huazhong Agricultural University, Wuhan 430070, China

Abstract Twelve species of the tribe Prosternini of the subfamily Dendrometrinae (= Denticollinae) are reported. A new species of the genus *Selatosomus* is described from Jiangxi under the name of *S. luanus*, and three species, *Hypoganomorphus laevicollis* MANNERHEIM, *Selatosomus* (*Pristilophus*) *melancholichus tianshanicus* DENISOVA and *S.* (s. str.) *aeneus* LINNAEUS are newly recorded from China.

Specimens marked by asterisk are lacking a part of detailed date.

VI. Subfamily **Dendrometrinae** GISTEL (= **Denticollinae** REITTER) (3)

Tribe Prosternini GISTEL (2)

50. *Hypoganomorphus laevicollis* (MANNERHEIM, 1852)
(Fig.1)

Diacanthus laevicollis MANNERHEIM, 1852, Bull. Soc. imp. nat. Moscow, 25 (4): 288 (Krasnoyarsk & Irkutsk).

Selatosomus gracilis MOTSCHULSKY, 1860, in SCHERENK's Reis. Fors. Amurlande 2, St.- Petersburg: 109 (Nicolaievsk-na-Amur), syn. by SOLSKY, 1870.

Agriotes suzuyamanus MATSUMURA, 1911, Journ. Col. Agr. Tohoku imp. Univ., Sapporo, 4(1): 121 (Saghalien), syn. by STEPANOV, 1935.

Hypoganomorphus laevicollis: GURJEVA, 1989, Fauna USSR, Nauka, 12 (3), Leningrad: 179-180, figs. 337-343 (E. Russia, Saghalien, Is. Kunashir & Mongolia).

Specimen examined: 1♀*, Mt. Changbai in Jilin Prov., 17.VII.1979.

Distr.: E. Russia, Saghalien, Is. Kunashir, Mongolia & N. China. New record to the fauna of China.

---

* Projects supported by the China National Science Foundation.

51. *Mosotalesus* (*Mosotalesus*) *cordialis* GURJEVA, 1989
(Fig.2)

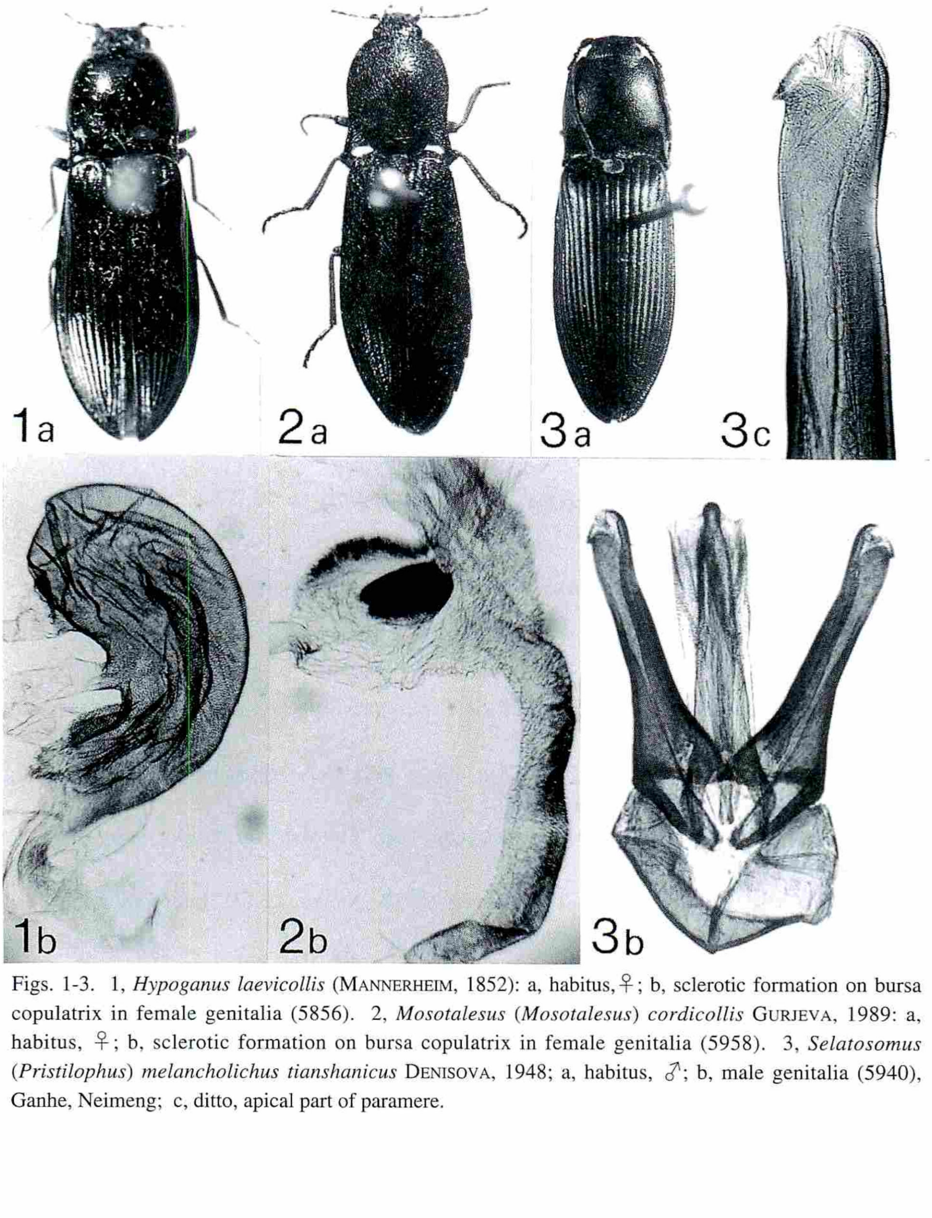
Mosotalesus (*Mosotalesus*) *cordialis* GURJEVA, 1989, Fauna USSR, Nauka, 12 (3): Leningrad (186), 197 & 198, figs. 357, 365 & 383 (China).

Specimen examined: 1♀*, Mt. Changbai in Jilin Prov., 20. V. 1983.

Distr.: China.

52. *Selatosomus* (*Pristilophus*) *melancholichus tianshanicus* DENISOVA, 1948
(Fig. 3)

Selatosomus melancholichus tianshanicus DENISOVA, 1948, Ent. obozr., Leningrad, 30 (1): 42 (S. Kazakh-



Figs. 1-3. 1, *Hypoganus laevicollis* (MANNERHEIM, 1852): a, habitus, ♀; b, sclerotic formation on bursa copulatrix in female genitalia (5856). 2, *Mosotalesus* (*Mosotalesus*) *cordicollis* GURJEVA, 1989: a, habitus, ♀; b, sclerotic formation on bursa copulatrix in female genitalia (5958). 3, *Selatosomus* (*Pristilophus*) *melancholichus tianshanicus* DENISOVA, 1948; a, habitus, ♂; b, male genitalia (5940), Ganhe, Neimeng; c, ditto, apical part of paramere.

stan & Kirgizstan).

Specimens examined: 1 ♂*, Ganhe in Neimeng Prov., 11. VI. 1950; 1 ♂*, Habahe in Xinjiang Prov., VI. 1982; 1 ♂*(maybe male, genital organ lost), Fuyun in Xinjiang Prov., VIII. 1989.

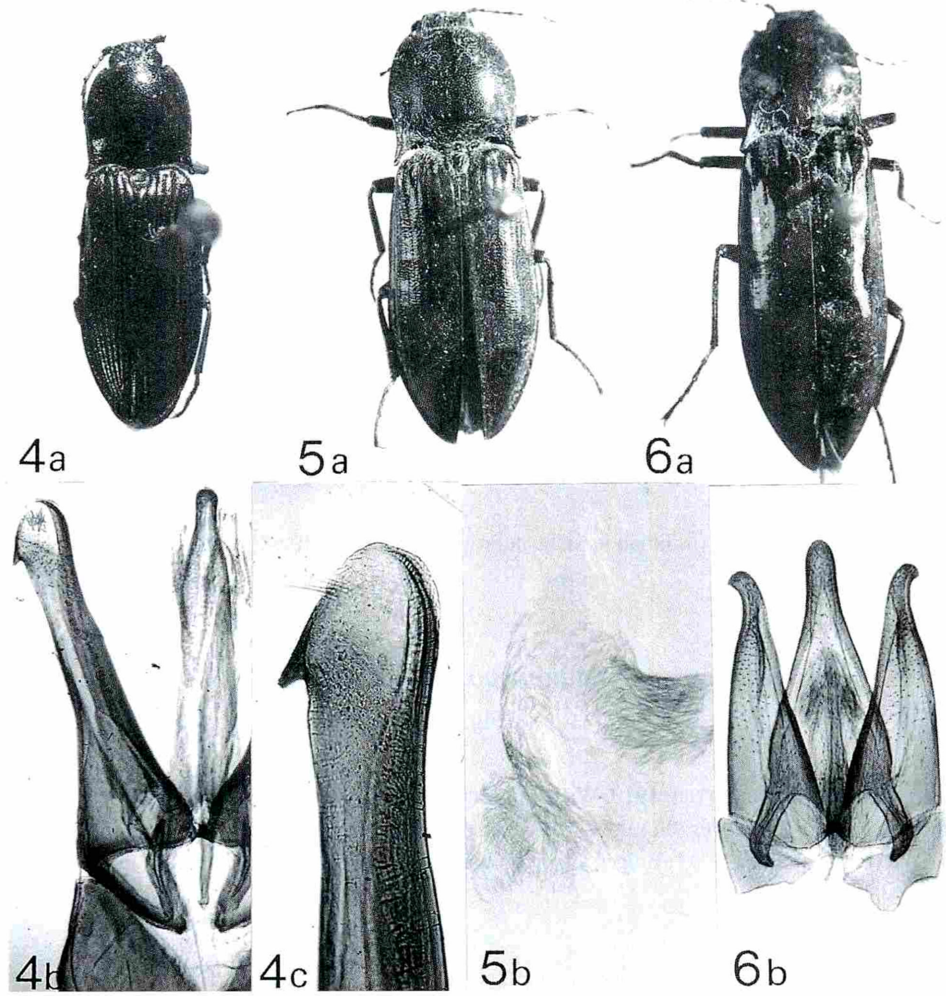
Distr.: S. Kazakhstan, Kirgizstan and W.China. New record to the fauna of China.

53. *Selatosomus* (*Pristilophus*) *punctatissimus* (MÉNÉTRIÉS,1851)

(Fig. 4)

Diacanthus punctissimus MÉNÉTRIÉS, 1851, Insec. In: Middendorff's Reise in Ost-Sibirie, 2, Zool., St.-Petersburg, 1: 53 (Irkutsk).

Diacanthus spretus MANNERHEIM, 1852, Bull. Soc. imp. nat. Moscow, 25(1): 285 (Irkutsk), syn. by TARNAWSKI, 1995.



Figs. 4-6 4, *Selatosomus* (*Pristilophus*) *punctatissimus* (MÉNÉTRIÉS, 1851); a, habitus, ♂; b, male genitalia (5942); c, apical part of paramere. 5, *Selatosomus* (*Selatosomus*) *puberulus* (CANDÈZE, 1879); a, habitus, ♀; b, sclerotic formation on bursa copulatrix in female genitalia (5945). 6, *Selatosomus* (*Selatosomus*) *aeneomicans* (FAIRMAIRE, 1889); a, habitus, ♂; b, male genitalia (5959).

Diacanthus nigrita MANNERHEIM,1852, ibid.:289 (Dauria), syn. by GURJEVA, 1985 with *spretus*.

Ludius (Metanomus) atriceps SAHLBERG, 1903, Ofvers. finska Vetensk Soc. Förh. 45 (10): 24 (Krasnojarsk), syn. by CHEREPANOV, 1957 with *spretus*.

Selatosomus (Pristilophus) punctatissimus: GURJEVA,1989, Fauna USSR, Nauka 12 (3), Leningrad: 233 & 234 (Mongolia & N-E.China).

Specimen examined: 1♂*, Buerjin in Xinjiang Prov., 5.VIII.1988.

Distr.: E. Russia, N. Mongolia and N. China.

54. *Selatosomus (Selatosomus) puberulus* (CANDÈZE, 1879)

(Fig. 5)

Corymbites puberulus CANDÈZE, 1879, Dt. ent. Z. 23 (2): 282 (Amur estuaries).

Selatosomus (Selatosomus) puberulus: GURJEVA, 1989, Fauna USSR, Nauka 12(3), Leningrad: (216), 236 & 237, figs. 434 & 448 (Habalovsk, Primorskij, N-E. China & Korea).

Aphotistus (Aphotistus) puberulus: KISHII et LI, 1990, Gekkan-mushi, 233: 30-31, photo 2 (Yingkou in China).

Specimens examined: 1♀*, Jiangnan, Panshi in Jilin Prov., 6.VI.1983; 1♀*, ditto, 5.VI.1985; 1♀*, Mt. Wudang in Hubei Prov., 1.VI.1984.

Distr.: E.Russia, Korea & N.China.

55. *Selatosomus (Selatosomus) aeneomicans* (FAIRMAIRE,1889)

(Fig. 6)

Corymbites aeneomicans FAIRMAIRE, 1889, Ann. Soc. ent. Fr. (6)9: 33 (Kuejczou = Gizhou in Middle China).

Selatosomus (Selatosomus) aeneomicans: GURJEVA, 1989, Fauna USSR, Nauka 12: (3),Leningrad: (216), 237 & 238 (China).

Specimen examined: 1♂, Ebian in Sichuan Prov., 14.VI.1981, HUA-GUI DAN leg.

Distr.: C. China.

56. *Selatosomus (Selatosomus) albipubens* REITTER, 1910

(Fig. 7)

Selatosomus albipubens REITTER, 1910, Wien. ent. Ztg., 29: 166, note 1 (Kukunor in Tibet).

Selatosomus (s.str.) *albipubens*: GURJEVA, 1985, Ent. obozr., Leningrad, 64 (3): 572. (Kazakhstan).

Specimen examined: 1♀*, Beipei, Chongqing in Sichuan Prov., 27. VI. 1959.

Distr. N-C.China.

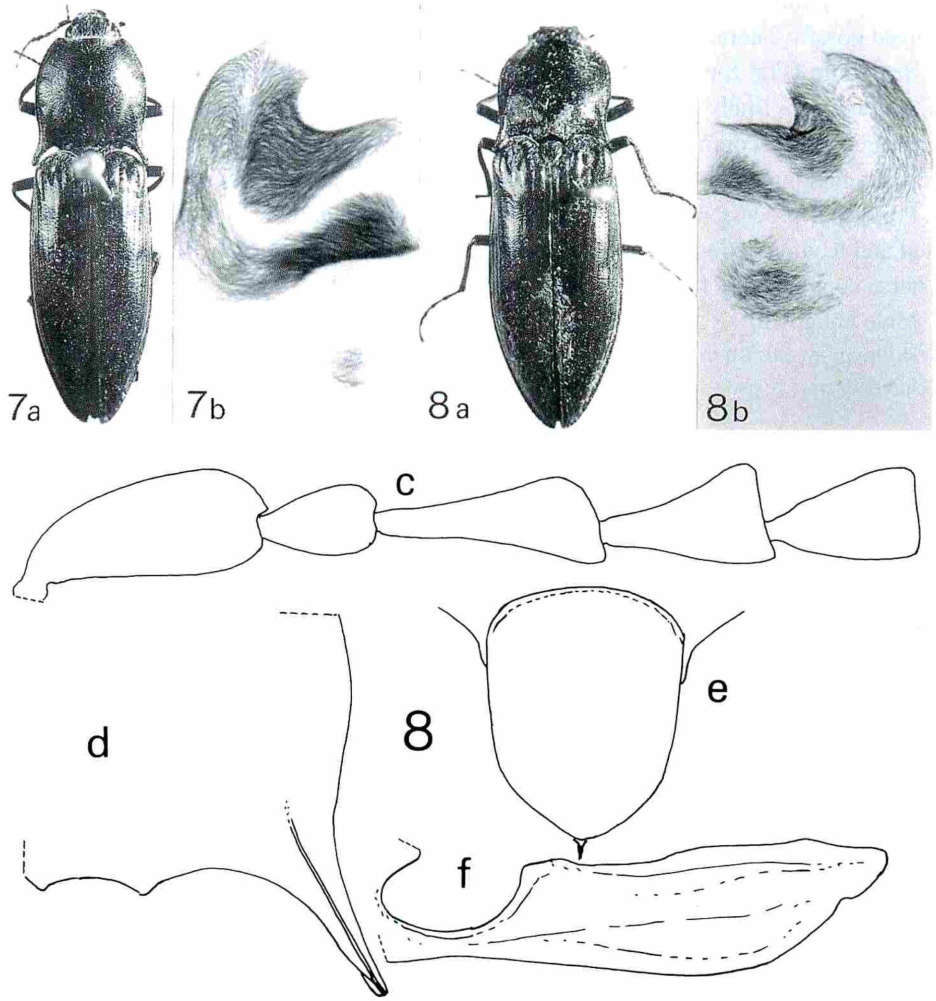
57. *Selatosomus* (*Selatosomus*) *luanus* KISHII et JIANG sp. nov.

(Fig. 8)

This new species is closely allied to the preceding Tibetan species, *Selatosous* (*Selatosomus*) *albipubens* REITTER, in the general outline of body, but is easily distinguishable from the latter by the body distinctly larger, the pronotal punctures clearly smaller and sparser, the hind angles of pronotum narrower and a little shorter, and the elytral punctures on strial interstices larger and plainly denser.

Female: Length: 22.1 mm. Width of elytral humeri: 6.8 mm.

Body black except femora and tibiae dark reddish, with purplish tinge on whole surface; pubescence long, tender, rather dense, entirely recumbent, more or less arched and entirely



Figs. 7 & 8. 7, *Selatosomus* (*Selatosomus*) *albipubens* REITTER, 1910; a, habitus, ♀; b, sclerotic formation on bursa copulatrix in female genitalia (5943). 8, *Selatosomus* (*Selatosomus*) *luanus* KISHII et JIANG sp. nov.; a, habitus, ♀, holotype; b, sclerotic formation on bursa copulatrix in female genitalia (5944); c, right antenna, 5 basal joints; d, hind angle of pronotum; e, scutellum; f, prosternal process in profile.

white, with silver tint.

Head with unmodified punctures which are generally uneven in density and size, small and a little sparse, and their interstices smooth and more or less wider than diameters of punctures in average. Antennae almost equal to the length of head and prothorax combined together and not so thick; relative length/width of basal 5 joints as 80/33, 35/24, 71/28, 61/35 and 50/30 respectively (Fig. 8-c); basal joint voluminous, 2nd subobconical, 3rd clearly elongate and triangular, 4th to 10th more or less serrated and gently becoming shorter towards the 10th, and apical joint subrhombic.

Pronotum feebly longer than wide in median measurement (ca. 1.1 times), gently convex above, without median longitudinal line but slightly and broadly depressed at the summit; discal punctures rather fine, unmodified, not sparse, plainly uneven in density and gently becoming denser laterad, and their interstices generally 2 or 3 times as wide as or more so at summit than diameters of punctures; hind angles (Fig. 8-d) triangular, narrow at bases, then divergently prolonged postero-laterad, rather short, acutely pointed at apices and shortly carinate.

Scutellum (Fig. 8-e) shield-shaped, a little longer than wide, scarcely convex above and even, exceedingly finely and sparsely punctured. Elytral striae obscure and partly vanished, with minute and discontinuous punctures on them; intervals flat, with irregularly sized, rather dense and small punctures; 4th intervals obviously concave at anterior end.

Prosternal process in profile (Fig. 8-f) plainly thick and elongate, posterior end obtusely pointed and having an obscure excavation before apex on under surface. Female genitalia armed with bursa copulatrix as figured sclerotic formation (Fig. 8-b).

Male unknown.

Holotyp: ♀, Mt. Lu in Jiangxi Prov., 9. VII. 1988 (preserved in the collection of Huazhong Agricultural University).

58. *Selatosomus* (*Selatosomus*) *aeneus* (LINNAEUS, 1758)

(Fig.9)

Elater aeneus LINNAEUS, 1758, Syst. nat. 10 ed. 1, Holmiae: 406 (Europe).

Elater germanus LINNAEUS, 1761, Fauna Svercica. Ed.2, Stockholmiae: 207 (Germany), syn. by KIESEN-WETTER, 1858.

Elater nitens SCOPOLI, 1763, Ent. Car. exh. ins. etc., Vindobonae: 91 (England), syn. by KIESENWETTER, 1858.

Elater viridinitens: VOET,1769, Cat.syst.Col.,Haag, 1769-1804, 1: 118, syn. by BUYSSON, 1894.

Elater aeneus-rufipes DEGEER, 1774, Mém. pour. Serv. l'hist. ins., Stockholm: 149 (Suisse), syn. by BUYS-SON, 1894.

Elater coerulens HERBST, 1784, Ent. Bem. versch. Akad. Schr. In: 11, syn. by KIESENWETTER, 1858.

Elater impressus: MARSHAM, 1802, Amer. midl.

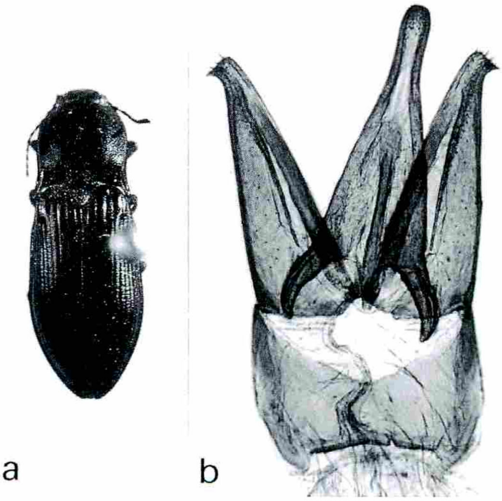


Fig. 9. *Selatosomus* (*Selatosomus*) *aeneus* (LINNAEUS, 1758); a, habitus, ♂; b, male genitalia (5952).

nat. 65 (2): 387, nec FABRICIUS, 1792, syn. by KIESENWETTER, 1858.

Elater cyaneus MARSHAM, 1802, ibid.; 388, syn. by KIESENWETTER, 1858.

Corymbites mutator REY, 1891, Éhange, Moulins, 7: 85, syn. by TARNAWSKI, 1995.

Corymbites subrugosicollis REY, 1891, ibid.: 85, syn. by TARNAWSKI, 1995.

Ludius superbus DANIEL, 1903, Klein. Abhand., krit. syn. Bemerk. Munc. Kol. Z., München, I (1902-1903) (2): 252, syn. by TARNAWSKI, 1995.

Selatosomus bescidicus REITTER, 1910, Wien. ent. Ztg., 29: 166, syn. by TARNAWSKI, 1995.

Selatosomus submontanus REITTER, 1910, ibid.: 166, syn. by TARNAWSKI, 1995.

Selatosomus subpuberulus REITTER, 1910, ibid.: 166, syn. by TARNAWSKI, 1995.

Selatosomus hispanicus REITTER, 1910, ibid.: 166, syn. by TARNAWSKI, 1995.

Selatosomus viturati PIC, 1910, Éhange, Moulins, 26: 67, syn. by LESEIGNEUR, 1972.

Selatosomus bicolor DEPOLI, 1913, Wien. ent. Ztg., 32: 22, syn. by TARNAWSKI, 1995.

Selatosomus vanrooni EVERTS, 1922, Col. Neerland. III, Gravenhage: 340, syn. by TARNAWSKI, 1995.

Selatosomus viridescens DEPOLI, 1928, Col. del. Lib. Intr. Fiume, 6: 229, syn. by TARNAWSKI, 1995.

Selatosomus violaceus: MARCU, 1933, Bull. Sec. Sci. Acad. Roum., Bucuresti, 16: 53, nec CANDÈZE, 1889, syn. by TARNAWSKI, 1995.

Selatosomus marginatus PAPP, 1943, A Magyar bog. hat., Budapest: 209, syn. by TARNAWSKI, 1995.

Selatosomus (*Selatosomus*) *aeneus*: GURJEVA, 1989, Fauna USSR, Nauka, 12 (3): 239-242, fig.513 (Mongolia etc.).

Specimen examined: 1♀*, Aletai in Xinjiang Prov., VI.1989.

Distr.: Eurosiberia and N. China. New record to the fauna of China.

59. *Selatosomus* (*Selatosomus*) *coreanus* (MIWA, 1928)

(Fig. 10)

Corymbites coreanus MIWA, 1928, Ins. Mats., 2 (3): 141, Pl. V, fig. 16 (Korea: Koryo & Shakuôji).

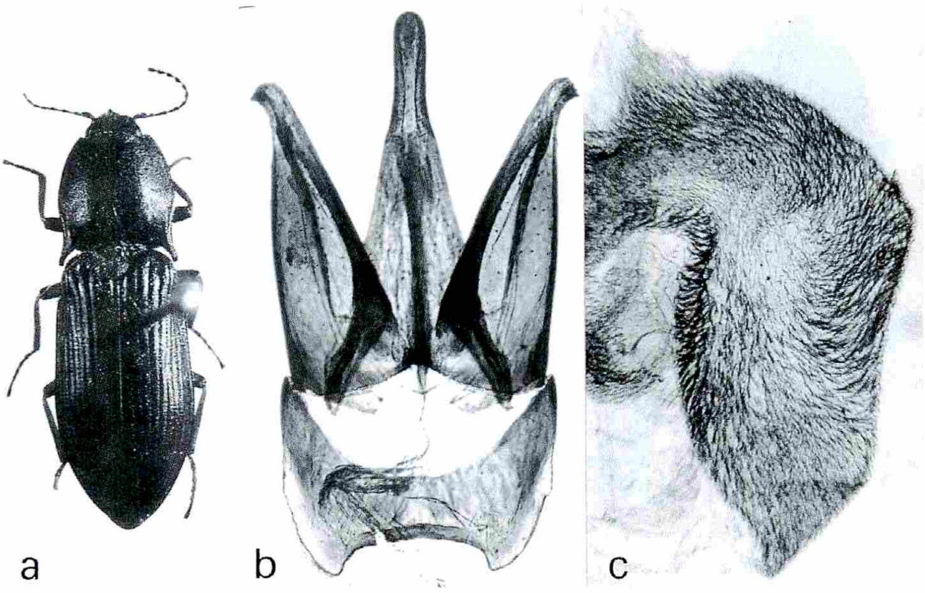


Fig. 10. *Selatosomus* (*Selatosomus*) *coreanus* (MIWA, 1928); a, habitus, ♂; b, male genitalia (5948); c, sclerotic formation on bursa copulatrix in female genitalia (59 47).

Selatosomus puberulus: REITTER, 1910, Wien. ent. Ztg., 29: 166, nec CANDÈZE, 1879 by GURJEVA, 1989 and syn. to *S. reichardti*.

Corymbites (*Selatosomus*) *puberulus* var. *coreanus*: MIWA, 1934, Fauna Elat. Jap. Emp, Dept. agr. Govt. Res. Inst., Formosa, 65: 167.

Selatosomus reichardti DENISOVA, 1948, Ent. obozr., 30(1/2): 42 (Amur & Primorskij). syn. by KISHII, 1993.

Aphotistus (*Aphotistus*) *puncticollis*: KISHII et LI, 1969, Gekkan-mushi, 210: 22 & 23, photo 3 (Yingkou in China), nec MOTSCHULSKY, 1866.

Specimens examined: 1♂*, Daxinganliang in Neimeng Prov., VII.1956; 1♂*, 1♀*, Mt.Changbai in Jilin Prov., 26.V.1981; 1♂*, Jiangnan, Panshi in Jilin Prov., 6.V.1985; 1♀*, Dongling, Shenyang in Lianin Prov.

Distr.: E. Russia, Korea, Mongolia and N. China.

60. *Selatosomus* (*Selatosomus*) *centralis* (CANDÈZE, 1881)

(Fig. 11)

Corymbites centralis CANDÈZE, 1881, Elat. nouv. III, Mém. Soc. roy. Sci. Liège, 9(2): 96 (Chine: Moupin).

Selatosomus (*Selatosomus*) *centralis*: GURJEVA, 1989, Fauna USSR, Nauka, 12 (3), Leningrad: (219), 248 & 249, figs. 459, 460 & 514 (Mongolia & China).

Specimens examined: 1♂*, Zyouyang in Guangxi Prov., 20. IV. 1982; 1♂*, Linjiang in Jilin Prov., VII. 1986: 1♀*, Buerjin in Neimeng Prov., VI.1989.

Distr.: Mongolia and N-C. China.

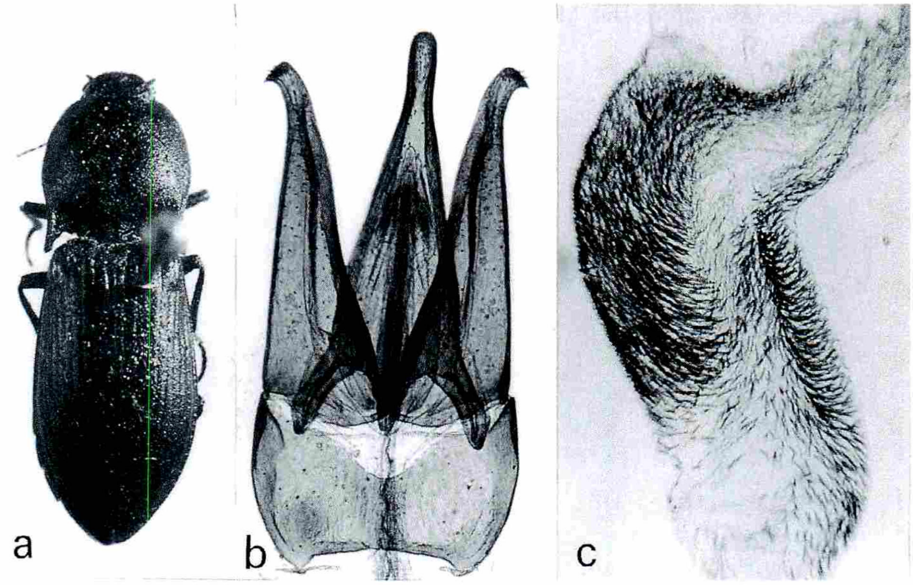


Fig. 11. *Selatosomus* (*Selatosomus*) *centralis* CANDÈZE, 1882; a, habitus, ♀; b, male genitalia (5955) ; c, sclerotic formation on bursa copulatrix in female genitalia (5954).

61. *Selatosomus* (*Selatosomus*) *latus latus* (FABRICIUS, 1801)
(Fig. 12)

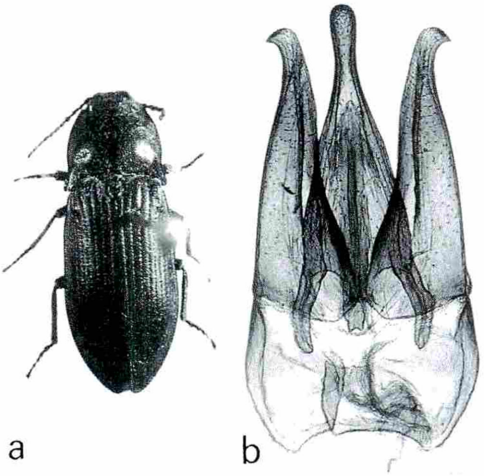


Fig. 12. *Selatosomus* (*Selatosomus*) *latus latus* (FABRICIUS, 1801); a, habitus, ♂; b, male genitalia (5949).

Elater latus FABRICIUS, 1801, Syst. eleuth., Kiliae, II: 232 (Europe).

Elater pectinicornis: FOURCROY, 1785, Ent. paris., Parisiis, I: 37, nec. LINNAEUS, 1758 by BUYSSON, 1894.

Elater germanus: OLIVIER, 1790, Ent. hist. nat. ins., Paris: 24, nec. LINNAEUS, 1761 by BUYSSON, 1894.

Diacanthus gravidus GERMAR, 1843, Zeit. Ent., 4: 78 (Germany), syn. by KIESENWETTER, 1858.

Diacanthus milo GERMAR, 1843, ibid.: 78 (Germany), syn. by KIESENWETTER, 1858.

Corymbites corpulentus CANDÈZE, 1879, D. E. Z., 23: 283 (Tarbagataij, Dauria & Amur), syn. by GUR-JEVA, 1982.

Corymbites sulcatus CANDÈZE,1881, Elat. nouv. III, Mém. Soc. roy. Sci. Liège, 2 (5): 96, syn. by TAR-NAWSKI, 1995.

Ludius subrubripes PIC, 1909, Éhange, Moulins, 25: 105, syn. by TARNAWSKI, 1995.

Selatosomus (*Selatosomus*) *latus latus*: GURJEVA,1989, Fauna USSR, Nauka, 12 (3), Leningrad: (221), 253 & 254, figs. 473-477 & 516 (Mongolia, N.China etc.).

Specimens examined: 1♂*, Jiangnan, Panshi in Jilin Prov., 6. VI. 1985; 2 ♂♂ *, Pengyang in Ningxia Prov., 29. IV. 1988.

Distr.: Eurosiberia, Asia minor, Syria, Transcaucasus, Kazakhstan, N. Mongolia and N. China.

要　約

岸井　尚・江世宏：中国産コメツキムシ覚書（4）— 今回はいわゆるコガネコメツキ類について報告するが，この類はヒラタコメツキ族の中ではよく肥厚した体形を持つ点で顕著である．旧北区域で多くの種に分化し，中国からはこれまでに約20種が知られている．一般に寒冷地あるいは高地帯に適応したグループであり，本稿では *Selatosomus luanus* を江西省北部の廬山から記載するとともに，*Hypoganomorphus laevicollis*, *Selatosomus melancholichus tianshanicus*, *S. aeneus* の3種を中国から初めて記録した．

Additional Reference

TARNAWSKI, D., 1995. A revision of the genus *Selatosomus* STEPHENS, 1830 (Coleoptera: Elateridae: Athoinae: Ctenicerini), Wrocaw: 183 p.

(Received Nov. 12, 1998; Accepted March 30, 1999)

Ent. Rev. Japan, 54 (1): 21-23, June 30, 1999

A New Subspecies of *Homotechnes motschulskyi* (FLEUTIAUX,1902) (Elateridae, Coleoptera) from Tochigi Prefecture

Some New Forms of Elateridae in Japan (XXX)

By TAKASHI KISHII

Kamihamuro 1-10-6-410, Takatsuki C., Osaka, 569-1044 Japan

Abstract A new subspecies of *Homotechnes motschulskyi* (FLEUTIAUX,1902) is described from Mt. Karasawa in Tochigi Prefecture under the name of *H. m. karasawa*.

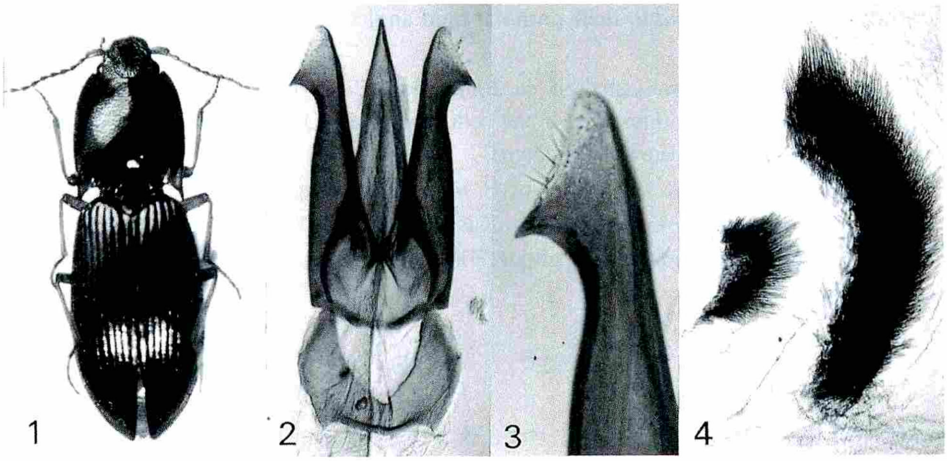
Key words Taxonomy; new subspecies, Hypnoidinae; Elateridae; Coleoptera; Japan.

Since the nominotypical subspecies of *Homotechnes motschulskyi* FLEUTIAUX was described from Tochigi, 38 subspecies has been known from Honshu and Shikoku. Lately I received interesting examples of the genus collected in Tochigi Prefecture through the courtesy of Mr. HIDEO OHKAWA, Ashikaga. As the result of my research I conclude that they are undoubtedly a valid new subspecies of *H. motschulskyi*. It is very similar to some large-sized subspcies, and it is, however, easily distinguished from these resemblers by the structures of the antennae and pronotum, and of the thorny plates on the bursa copulatrix in the female genital organ. Before going further, I wish to express my sincere gratitude to Mr. H. OHKAWA for his kind goodwill.

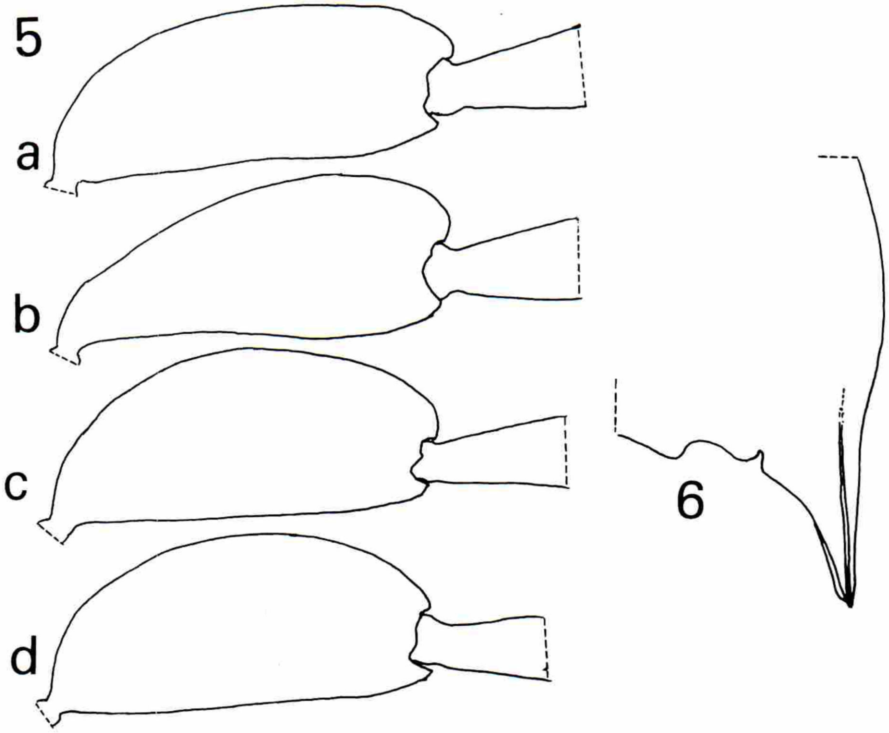
Homotechnes motschulskyi karasawa subsp. nov.

(Figs.1-6)

Male: 11.76-11.88 mm in length; 3.12-3.24 mm in width. Female: 12.12-13.68 mm in length; 3.24-3.54 mm in width.



Figs.1-4. *Homotechnes motschulskyi karasawa* subsp. nov. 1, habitus, holotype, ♂; 2, male genitalia (7475); 3, ditto, apex of paramere; 4, sclerotic plates of bursa copulatrix in female genitalia (7463).



Figs. 5 & 6. 5, basal joint of antenna in female; a, *Homotechnes motschulskyi karasawa* subsp. nov.; b, *H. m. shimotsuke* (KISHII, 1986); c, *H. m. ondai* (KISHII, 1990); d, *H. m. ohkawai* (KISHII, 1986); 6, *H. m. karasawa* subsp. nov., hind angle of pronotum.

The general feature and coloration explicitly similar to the subspp. *shimotsuke* KISHII, 1986, *ohkawai* KISHII, 1986 and *ondai* KISHII, 1990 from Tochigi, but this new subspecies is discriminated from them by the denser and larger punctures on pronotal disc, the more elongate and parallel-sided basal joint of antenna (Fig.5), and by the different shape of the apex of paramere in male genitalia (Figs.2 & 3) and thorny plates of bursa copulatrix in female genitalia. (Fig.4). This new subspecies (Fig.6) resembles subsp. *ohkawai* in parallel-sided hind angles of pronotum but is a little larger in body size and generally more blackish on the dorsal surface. Further, in *shimotsuke* and *ondai*, their pronotal hind angles are more or less divergent posterolaterad.

Holotype: ♂, Mt. Karasawa-yama (alt. ca. 200m), Sano City, Tochigi Pref. (栃木県佐野市唐沢山), 24. V. 1998, H. OHKAWA leg. (Preserved in the collection of the Osaka Museum of Natural History). Paratypes: 1♂ and 3♀♀, same date as the holotype.

Note Whereas the most subspecies of *H. motschulskyi* occur in the cold and high mountainous regions except *H. m. okudai* from Mt. Kasuga (alt. ca 300 m), the present new species is peculiar to be found in low mountain as about 200 m in altitude.

要　　約

岸井　尚：栃木県佐野市唐沢山からのミヤマヒサゴコメツキの一新亜種の記載. — 栃木県は本種の原名亜種の原産地でその周辺地を含めると多くの亜種群が知られているが，通常では寒冷

高地で局所的に棲息するものが殆どである．今回見いだされた個体群の生息地唐沢山は標高僅かに200mという低山地で，奈良市内の春日山（標高約300m）からのssp. *okudai* と共に極めて珍しい例といえよう．前胸背板の形状，その点刻及びこの種に特徴的な雌の貯精嚢内にあるブラシ状の構造形態の差で，他の近似亜種とは明瞭に区別できる．和名新称はカラサワミヤマヒサゴコメツキとする．

References

Kishii, T., 1986. Some new forms of Elateridae in Japan (XVIII). *Bull. Heian High School*, 30: 37-56.

——— 1990. Notes on Elateridae from Japan and its adjacent area (9) (Coleoptera). *Ibid.*, 34: 1-16.

(Received Nov. 12, 1998: Accepted March 30, 1999)

Ent. Rev. Japan, 54 (1): 25-33, June 30, 1999

Notes on the *Eucibdelus* Group of the Staphylinidae (Coleoptera) from Asia, 4. Description of *Paraphytolinus sumatrensis* gen. et sp. nov from Sumatra

By YASUHIKO HAYASHI

Suimeidai 3-1-73, Kawanishi City, Hyôgo, 666-0116 Japan

Abstract A new genus and a new species is described from Sumatra under the name of *Paraphytolinus sumatrensis* in the *Eucibdelus* group of the Staphylinidae.

Recently I found two unnamed species of the Staphylinidae from Sumatra and Malaysia, which are seemingly close to a species of *Eucibdelus*. They are constituted of a male and a female, and classified into two species by a different shapes of the head and the protarsi. Their close examination reveales that they are closely related to *Phytolinus* in the structures of head including mouth organs, 9th and 10th segments of abdomen, and also to *Rhyncocheilus* in these structures and the legs, but are characteristic in the structures of the protarsi, setose 4th segment of the maxillary palpi, the chaetotaxy of the subgenae and the mentum, and thus a new genus proposed on a new species based on a male, but the other species on a female is not named in order to avoid the undesired confusion.

In the *Eucibdelus* group the genera *Rhyncocheilus* FAUVEL, *Phytolinus* SHARP and *Paraphytolinus* gen. nov. compose a subgroup by the peculiar structure of mandibles, which produce a little ventrad and again curved ventrad at about the middle, and the left mandible has a well developed canine.

Before going further, I wish to express my cordial thanks to Dr. KATSURA MORIMOTO, the Emelites Professor of Kyushu University (Department of Agriculture), Fukuoka for his kindness of critically reading the manuscript of this paper. I am also much obliged to Mr. TAICHI SHIBATA, Nishinomiya, for his kindness of copying the paper of NAKANE et SAWADA, 1954 by handwriting before 30 years.

The main terminology and abbreviations used herein are the same as those explained in the first part of this series and HAYASHI, 1993.

Paraphytolinus gen. nov.

(Figs. 1-16)

Type species: *Paraphytolinus sumatrensis* sp. nov.

Body elongate, nearly parallel-sided, rather shiny, moderate in size and covered with sparse tomentum.

Head (Fig. 2) subhexagonal to subquadrate, emarginate at base, weakly convex above, roundly more rised in vertex; upper surface coarsely and umbilicately punctured except for the vertexal rise which is rather densely and minutely punctured; subgenae weakly convex and nearly impunctate; chaetotaxy of macrosetae fully developed only except genal macrosetae which are reduced and imperceptible, subgenal macrosetae single on each side; occipital macrosetae situated much more anteriorly than infraorbital and postgenal ones, and near upper hind angles of eyes. Antennae filiform, with basal 5 segments polished but 5th weakly so. Eyes large and convex.

Mandibles (Figs. 3-4) long, a little shorter than head, not tuberculate above, strongly arcuate, produced downward and more curved ventrad at about basal third; right mandible with a rather small molar before the middle; left mandible with a rather small canine and a molar before the middle.

Labrum subpentagonal, much shorter than head, completely bilobate, strongly declivous in front, sparsely punctate and weakly shiny; each lobe subtrapezoidal, with several long setae of various length at apical margin.

Galea subfusiform, distal lobe densely pubescent; proximal sclerite obtrapezoidal, with a fine pale seta at apex. Lacinia suboblong, densely pubescent in inner half. Maxillary palpi (Fig. 5) elongate and filiform; 1st segment the shortest, strongly curved and a little thickened apicad, with a short seta near apex; 2nd the thickest, much longer than wide, weakly curved, with about 3 fine setae near apex and one at about the middle of lateral side; 3rd a little longer than 2nd, weakly curved, gently thickened apicad, bearing about 3 fine setae near the middle and about 5 ones near apex; 4th elongate, subfusiform, nearly as long as and a little slenderer than 3rd, straight and with a few short and fine setae.

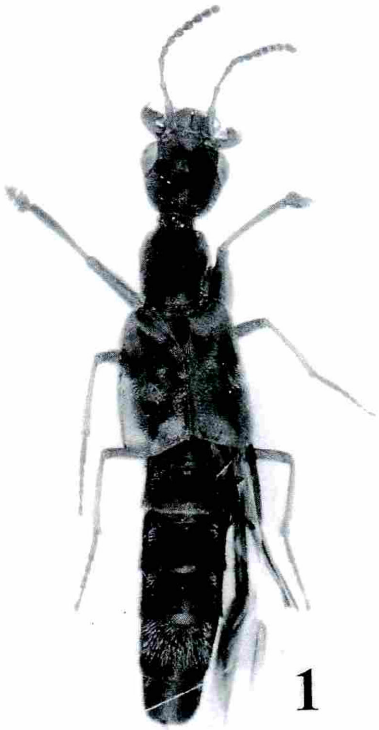
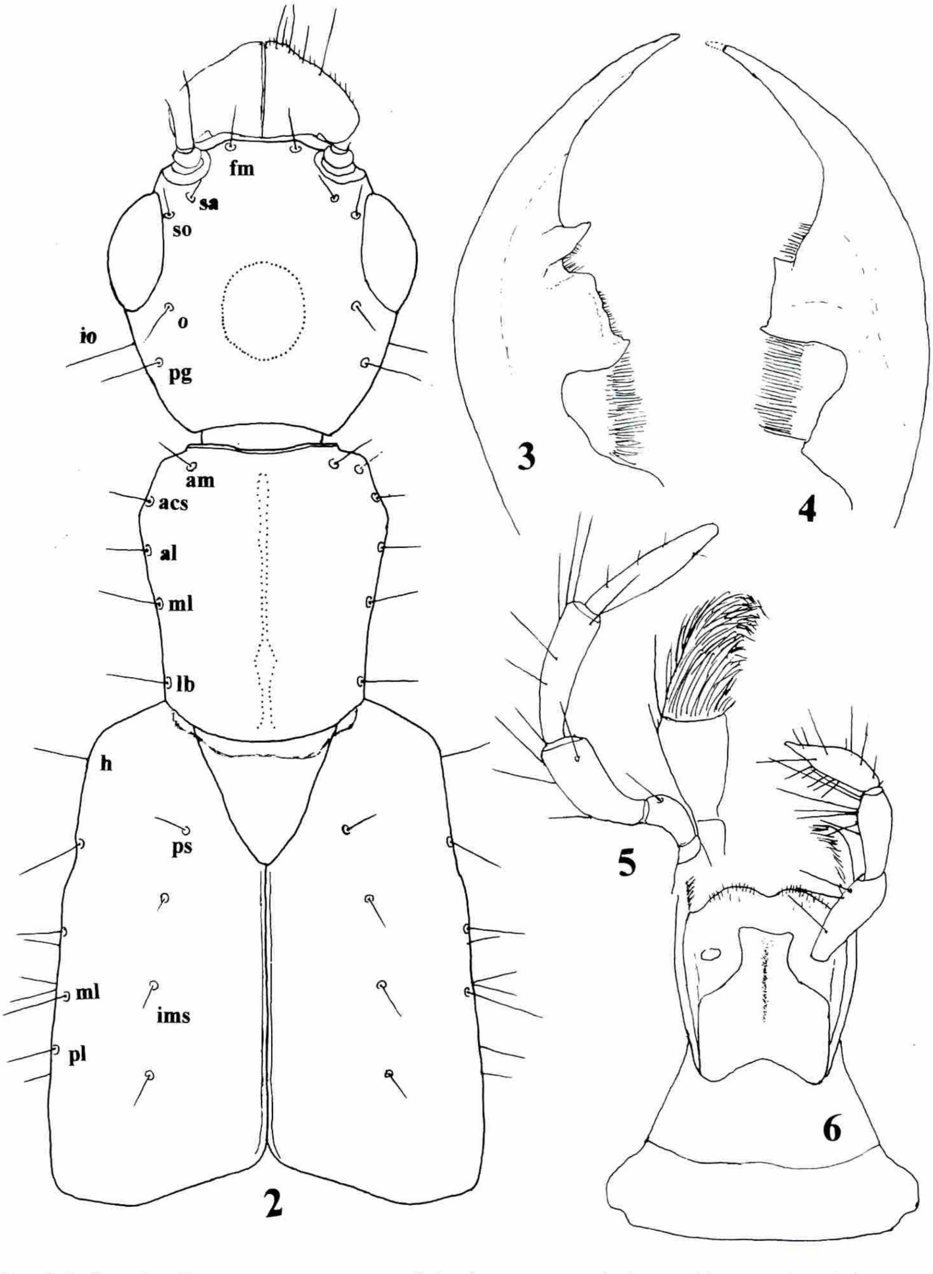

1

Fig. 1, *Paraphytolinus sumatrensis* sp. nov. , habitus

Labial palpi elongate, each segment much longer than wide; 1st segment weakly thickened apicad, with 2 long fine setae at about apical third; 2nd nearly as long as 1st and slightly shorter than 3rd, a little thickened apicad, with about 7 setae of various length in apical half; 3rd subfusiform, blunt at the tip, bearing 10 and more fine setae of various length. Ligula short and wide, widely and shallowly emarginate at apex and sparsely ciliate. Paraglossae rather long and wide, extending a little beyond 1st segment of labial palpi, densely pubescent at inner margin and densely ciliate on dorsal sides. Prementum subpentagonal, slightly longer than wide and impressed medially.

Mentum (Fig. 6) relatively long but strongly transverse, without any setae. Gular suture very close to each other in middle and then gradually divergent anteriad and posteriad. Mental fossa sharply carinate at least lateral half of the hind border and very gently inclined in the median half.

Pronotum (Fig. 2) nearly barrel-shaped, widest before the middle and more or less convex at anterior angles; disc more or less flattened, coarsely and rather densely punctured, the



Figs. 2-6, *Paraphytolinus sumatrensis* sp. nov: 2, head, pronotum and elytra, with macrochaetal chaetotaxy (acs=macroseta on anterior corner; al=anterolateral; am=antero-marginal; fm=front marginal; h=humeral; ims=intermedial setae; io=infraorbital; lb=laterobasal; ml=midlateral; o=occipital; pg=postgenal; pl=post-lateral; ps=parascutellar; sa=supra-antennal; so=supraophthalmic); 3, left mandible (c=canine; m=mollar); 4, right mandible; 5, maxillary pulpus; 6, labium

punctures umbilicate and interspaces shiny; median line obscurely defined, somewhat convex and narrow-ly impunctate; chaetotaxy composed of antero-marginal, antero-lateral, mid-lateral and latero-basal macrosetae, and well developed, one or two additional long setae situated on anterior cor-ner; superior lateral line running forwards from base, immediately hidden under lateral side of disc, and therefore the line entirely invisible in dorsal view, then united with inferior lateral line just behind posterior end of lateral border of prosternum. Epimera (=hypomeral projections) absent.

Scutellum triangular, shallowly depressed and punctured; prescutum not elevated but prescutoscutellar suture clear.

Elytra oblong, weakly uneven here and there and finely striate along suture; chaetotaxy composed of rather mal-developed macrosetae and a group of long setae, viz., in the type species humeral, mid-lateral, postlateral, parascutellar macrosetae and a group of intermedial setae are recognized. Hind wings fully developed, functional.

Prosternum nearly flattened, only weakly convex in middle, not ridged medially, without paired long setae at the middle but with a few fine short black setae; prosternal process not protuberant, blunt at the tip. Furcasternum not ridged medially.

Mesosternum nearly flat, long, sparsely and coarsely asperate-punctate, and posteriorly with a row of a few setae.

Abdomen elongate, nearly parallel-sided, much narrower than elytra, strongly convex dorsally but deeply and transversely depressed at base on 3rd to 6th tergite, the depression with a trapezoidal hollow in middle; each tergite with 2 pairs of long setae in both side; 7th tergite covered with long dense tomenta; male 8th sternite (Fig. 7) emarginate at apex; male 9th sternite (Fig. 8) subquadrate, roundly emarginate at apex; male 10th tergite (Fig. 9) subtrapezoidal, transversely and narrowly extended ventrad at base.

In female 10th tergite (Fig. 15) subtriangular, narrowly rounded at apex, shortly protuberant laterad at base and numerously pubescent along margins. Genital segment without accessory sclerite; 2nd gonocoxcite (Fig. 16) sparsely pubescent; minute stylus with a long seta at the tip.

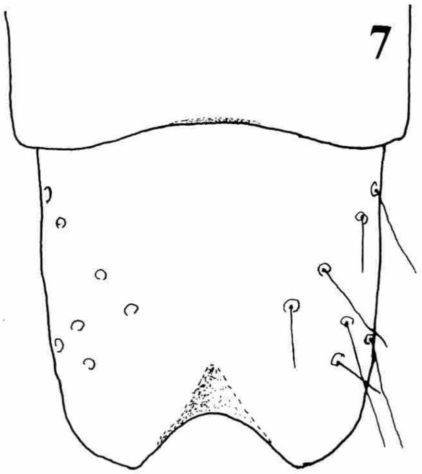
Male genitalia (Figs. 10-12) asymmetrical; penis sucylindrical, mem-branous in basal portion of the dorsum but fully sclerotized in the apical third; parameres unilobed, elongate, narrowed apicad and with numerous peg-setae in inner face of apical portion on ventral surface.

Legs slender and long, all the tibiae not spinous except terminal spurs; profemora not carinate below but with a longitudinal row of fine setae along the middle; protibia narrow in dorsal view but wide and widened apicad in lateral view, subtriangular in cross section, and terminal spur single, very short and hardly visible; protarsi (Fig. 13) strongly patellate and with modified setae in basal 4 segments, much wider than apex of protibia in dorsal view; 5th protarsomeres flat, rather elongate, protrudent the apical half beyond 4th segment in ventral view. Meso- and metatibiae rather sparsely pubescent, with 2 short and distinct terminal spurs; meso- and metatarsomeres with basal 4 segments slender, not dilated and not lobate, truncate at each apex in ventral view; 1st segment of metatarsus longer than the following 2 segments combined together and slightly so than 5th segment; empodial setae paired, fine and a half as long as claws.

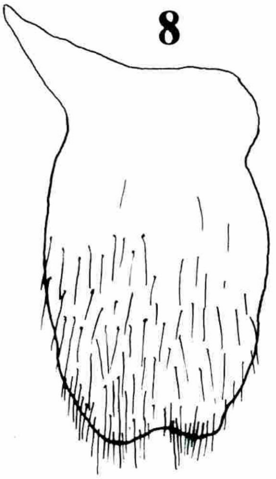
Notes The present new genus and the genus *Phytolinus* are well similar to each other in proportion of segments of the maxillary and labial palpi and chaetotaxy on the head and pronotum, but in the former the subgenae bear only one well developed macroseta in each side, 4th segment of the maxillary palpi bears a few short fine setae, and the apical third of 5th

---

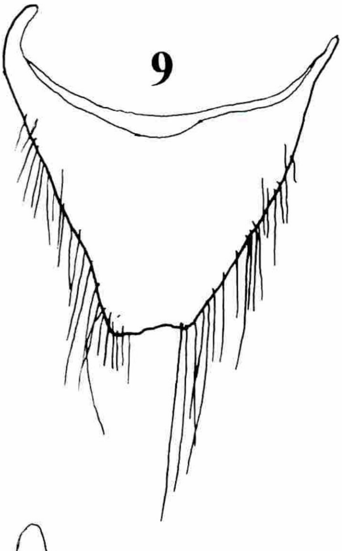
Figs. 7-13. *Paraphytolinus sumatrensis* sp. nov.: 7, 7th and 8th sternites of abdomen; 8, male 9th sternite; 9, male 10th tergite; 10-12, male genitalia: 10, ventral view; 11, right lateral view; 12, apical portion of parameres; 13, left protarsi.



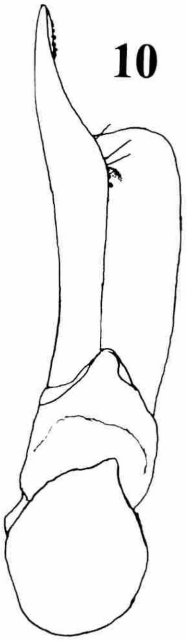
7



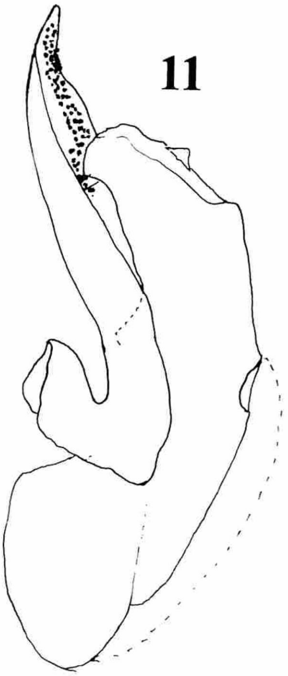
8



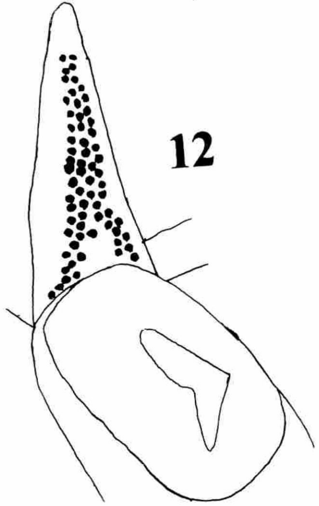
9



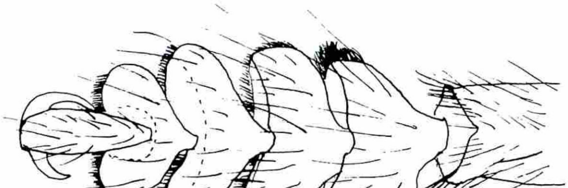
10



11



12



13

segment of the pro-tarsi is visible in ventral view. Whereas in the latter the subgenae bears a few well developed long setae, the 4th segment of maxillary palpi is entirely glabrous, and the claw and apex of 5th segment of the protarsi only are visible in ventral view. The present genus is also similar to the genus *Rhyncocheilus* FAUVEL in the structure of mouth organs, chaetotaxy on head and pro-notum and structures of protarsomera, but in the latter 4th segment of the maxillary palpi is glabrous and mentum bears a erect seta at each lateral corner, while in the former the mentum is unhaired.

Etimology The generic name is derived from Greece. "Para" means "near", and *Phytolinus* is known generic name. "Phyto (=Phyton)" means "tree, plant or slip", and "linus (=linon)" means "net or fibers".

Paraphytolinus sumatrensis sp. nov.

(Figs. 1-13)

Male. Body slender and strongly shiny, covered with short and rather sparse pubescence; fore body including mouth organs largely yellow and hind one blackish brown; head and pronotum widely dark brown in middle of dorsum; labrum and mandible pitchy at margins; antennae brownish yellow with distal 5 segments black; elytra somewhat infuscate near lateral sides; abdominal tergites narrowly reddish brown at apical margins, and sternites narrowly reddish at sides and narrowly yellowish at hind margins; metathorax blackish brown. Pubescence on head, pronotum and elytra almost golden yellow, elytra with whitey pubescence in about middle of each side; pubescence on ventral side of body silvery white; pubescence on 3rd to 6th and 8th tergites golden yellow but those on 7th silvery white and long. Length: 11.8 mm.

Head (Fig. 2) subhexagonal, strongly narrowed posteriad, nearly straight at postgenae, narrowly rounded at hind angles, feebly emarginate at base, a little wider than long (30.0 : 27.0), nearly as long as and a little wider than pronotum (30.0 : 24.0); mandible stout, a little shorter than head (20.0 : 27.0); labrum much shorter than head (10.5 : 27.0), reticulately microsculptured, very sparsely punctate with stiff pubescence and bearing about 6 long setae of various length at apical margin; dorsum coarsely rugosely and moderately densely punctured except for clypeo-frontal area, rise in vertex and postgenae, the punctures umbilicate and irregular in size, the interstices flat, obscurely microsculptured with fine striae; the clypeofrontal area finely and very sparsely punctured, with clear striate microsculpture; rise in vertex nearly circular, gently convex, minutely and rather densely punctured, not microsculptured, and the punctures various in size; postgenae extremely sparsely punctured, without microsculpture; macrosetae fully developed except genal macroseta which is reduced and imperceptible. Eyes large, markedly prominent laterad and only slightly shorter than postgenae. Antennae moderately long, reaching at about elytral shoulders, slightly thickened apicad but nearly as thick as in apical 5 segments to each other; all the segments longer than wide, 11th segment subfusiform, a little more than twice as long as wide (18.0 : 8.0) and with the following relative length: 25.0-15.0-20.0-8.5-8.5-9.0-9.0-9.0-9.5-11.0-18.0.

Subgenae almost smooth, extremely sparsely punctate, with faint linear microsculpture; subgenal macrosetae fully developed.

Pronotum (Fig. 2) oblong, weakly tuberculate just behind front angles, a little longer than wide (27.0 : 24.0), much shorter and narrower than elytra (27.0 : 48.0 & 30.0 : 43.0), widest at front fourth, gently narrowed behind, feebly sinuate at sides, which are shallowly emarginate in basal half; front margin feebly emarginate and hind one nearly straight; front angles obtusely rounded and basal ones widely rounded; disc rather flat, weakly convex medially, shallowly foveolate at about basal fourth, vaguely and widely depressed in anterior third of each side; punctures coarse, dense, irregular in size and umbilicate but very sparse in deflexed sides and basal area, interspaces smooth, much narrower than longitudinal diameter of punctures except for sides and base; median line very narrowly and irregularly impunctate except basal portion which is depressed and a little widely impunctate.

Scutellum coarsely and densely punctured as on pronotum except margins, without microsculpture.

Elytra (Fig. 2) subquadrate, a little longer than wide (48.0 : 43.0, in maximum length) weakly dilated posteriad, weakly arcuate at sides, shallowly emarginate at apices, widely rounded at latero-apical angles; surface widely uneven, vaguely depressed along suture behind scutellum, about in middle, inner apical angles and middle of each side, minutely and sparsely punctured, with microsculpture very fine and linear; macrosetae slender and delicate, humeral, midlateral and postlateral macrosetae accompanied with 1 or 2 setae.

Abdomen with 4th to 6th tergites each very densely and rugosely punctured in the median trapezoidal hollow but very sparsely and finely so in 3rd tergites, sides and hind areas of 4th to 6th tergites; 7th tergite evenly and gently convex, finely and rather closely punctate; apex of 8th gently arcuate and feebly emarginate in middle; 10th tergite (Fig. 9) obliquely truncate at apex, fringed with rather long pubescence at margins, and base extending latero-ventrad as a very elongate band on each side; sternites with punctures much larger than those on tergites, coarser and denser at each base, smaller and sparser in each hind area; 7th sternite feeb-ly emarginate at apical margin; 8th sternite (Fig. 7) roundly, rather deeply emarginate at apex, subtriangularly depressed just before the emargination and with about 7 bristle on each side.

Male genitalia (Figs. 10-12) asymmetrical and twisted to the left; penis subcylindrical, parallel-sided, obliquely truncate in ventral view, gently curved ventrad, membranous in basal two-third of dorsum and with a small subacute tubercle at the left of apex, the tips of the tubercle hidden by paramere in lateral view, apical orifice large, obliquely open and exposing a small subconical inner copulatory piece at the middle. Parameres unilobed, slender, gently sinuate, weakly emarginate at sides in basal half, gradually narrowed towards blunt tip in apical half in ventral view, nearly straight in basal two-thirds, gently curved dorsad in apical third, feebly bisinuate at dorsal margin and gently narrowed towards the tip in apical third in lateral view; inner (=dorsal) face medially with a row of peg-setae in apical third, the row ramified laterad at the level of top of penis.

Legs slender and long; profemora and protibiae densely pubescent below; protarsi (Fig. 13) very wide; mesotibiae weakly sinuate in lateral view and with sparse and long pubescence; metatibiae straight,with sparse and long pubescence; metatarsi slender, not lobate.

Holotype: ♂, Brastagi. Gn Sinabung (1500-2000 m), N. Sumatra, Indonesia, 14-17. III. 1998, L. POCAK leg. (preserved in the collection of Osaka Museum of Natural History, Osaka).

Notes The present species somewhat resembles *Rhynchocheilus elegans* SCEERPELZ from Burma (=Myanmar) in general appearance except colouration, but the head of the latter species is not rised in the vertex judging from SCHEERPELZ's original description,.

Etymology Specific name is derived from the locality of the new species.

Paraphytolinus sp.
(Figs. 14-16)

Specimen examined: ♀, Tanahrata (1500 m), Cameron Hi-Land, 30 km E. of Ipoh, Pahan, W. Malaysia, 22-26. I. 1999, P. CECHOVSKY leg.

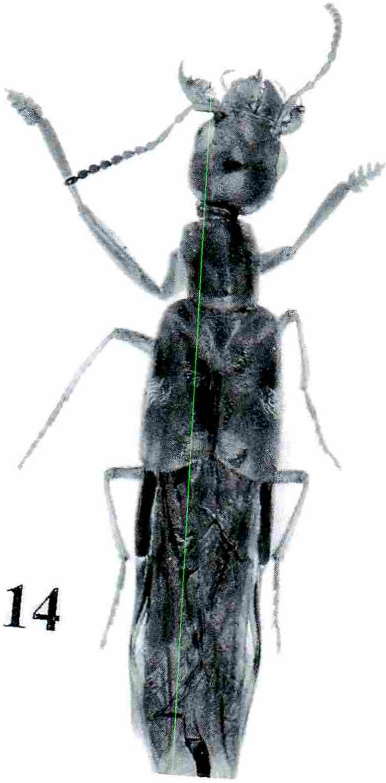
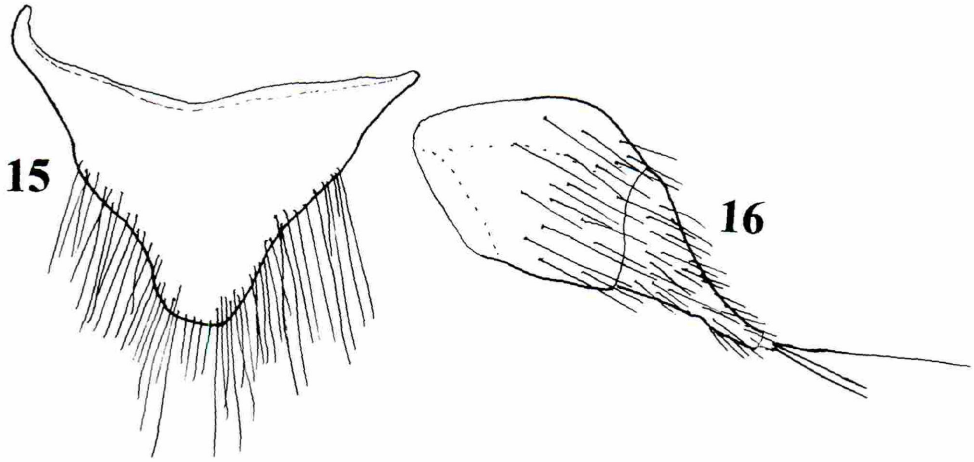

14

Fig. 14. *Paraphytolinus* sp., habitus



Figs. 15-16. *Paraphytolinus* sp. 15, female 10th tergite; 16, female second gonocoxite.

要　約

林　靖彦：アジア産ハイイロハネカクシ類覚書き，4．ハイイロハネカクシ類の一新属新種．― 手元のハイイロハネカクシ類を調査していたところ，*Eucibdelus* 属の種に非常によく似ているが前肢の構造が全く異なった種を見つけ，精査の結果近縁のどの属とも異なっていると考えられたので，*Paraphytolinus sumatrensis* という名のもとに新属，新種として記載した．本属は一見 *Phytolinus* 属にもよく似ているが，頭頂あたりに陥凹がなく（逆に瘤状になっている），前腿

節，前脛節の構造が異なっていることなどで区別できる．また，*Rhyncocheilus* 属とは外観は非常に異なっているが，前肢や上唇の構造はよく似ており，むしろこの属に近いものと思われる．しかし後者では大腮鬚第4節には毛がなく，頭部下面（subgenae）には大棘毛を欠いていることで区別される．

References

CAMERON, M., 1932. Coleoptera. Staphylinidae III. In: *the Fauna of British India including Ceylon and Burma*: xiii+443 pp., 4 pls. Taylar Francis, London.

HAYASHI, Y., 1993. Notes on the Asian Staphylininae, I (Coleoptera, Staphylinidae). *Elytra*, *Tokyo*, 21: 281-301.

——— 1997. Studies on Staphylinidae from Japan, VI. A new species and two new subgenera of the genus *Eucibdelus* KRAATZ from Japan. *Ent. Rev. Japan*, 52: 25-37.

KRAATZ, G., 1859. Die Staphyliniden-fauna von Ostindien, insbesondere der Insel Ceylon. Berlin. 196 pp., 3 pls.

NAKANE, T. & K. SAWADA, 1954. New or little-known Coleoptera from Japan and its adjacent regions. X. *Trans. Shikoku ent. Soc.*, 4: 7-15.

NAOMI, S., 1984. Studies on the genus *Phytolinus* SHARP (Coleoptera, Staphylinidae) from Japan and Taiwan, with descriptions of two new species. *Kontyû, Tokyo*, 52 (3): 382-389.

SCHEERPELZ, O. 1965. Wissenschaftliche Ergebnisse der Schwedischen Expedition 1934 nach Indien und Burma. Coleoptera, Staphylinidae. (except. Megalopsidiinae et Steninae) (5 Beitrag zur Kenntnis der orientalischen Staphyliniden). *Ark. Zool.*, 17, 2: 93-371.

SHARP, D. 1889. The Staphylinidae of Japan. *Ann. Mag. nat. Hist.*, (6) III: 108-121.

(Received May 5, 1999: Accepted May 16, 1999)

Errata and Corrigenda

By YASUHIKO HAYASHI

(Managing Director and Editor of the Japan Coleopterological Society)

I would like to apologize to Messrs. HIDETO HOSHINA and NOBUYUKI NARUKAWA for mis-editing their paper published in the Entomological Review of Japan, 53 (2): 56. The mis-editing was caused by my mis-operation of PC. Therefore I would like to emend the following points:

In the Entomological Review of Japan, 53 (2)

"Discovery of the Subgenus Macroceble of the Genus Agathidium (Coleoptera: Leiodidae) from Honshu, Japan, with Descriptions of Two New Species"

by HIDETO HOSHINA and NOBUYUKI NARUKAWA

p. 56: 25-26, for 5-5-4 in male, 4-4-4 in female.

Female: Spermatheca (Fig. 14) .... read

5-5-4 in male, 4-4-4 in female.

Male. Aedeagus (Figs. 12-13) constricted at the base, curved in an arc, almost straight from about middle to about apical one-eighteenth, reflexed and pointed at apex in lateral view, almost parallel sides, triangular in apicalportion in ventral view; parameres slender in general, a little shorter than median lobe, triangular in base, curved in an arc, rounded at apex in lateral view, a little expanded and pointed at apex in ventral view.

Female. Spermatheca (Fig. 14) ....

Ditto

In "**CONTENTS**"

Line 1, for HOSHINA, H: The Subgenus ..... read HOSHINA, H. & N. NARUKAWA: The Subgenus ....

Ent. Rev. Japan, 54 (1): 35-36, June 30, 1999

A New Subspecies of *Onthophagus carnarius* (Coleoptera, Scarabaeidae) from Miyakojima Is., the Ryukyus

by

TERUO OCHI
21-6, Kohudai 5 chome, Toyono-cho, Toyono-gun, Osaka, 563-0104 Japan

YOSHIKAZU MIYAKE
Nagayama 3-3-7-201, Tama City, Tokyo, 206-0025 Japan

and

YOSHIHISA KUSUI
The Osaka Quarantine Station
10-3, Chikko 4 chome, Minato-ku, Osaka City, Osaka, 552-0021 Japan

Abstract A new subspecies of *Onthophagus* (*Parascatonomus*) *carnarius* NOMURA is described as *O. c. miyakoinsularis* from Miyakojima Island, the Ryukyus, Southwest Japan.

The subgenus *Parascatonomus* is known as a carrion feeder (NOMURA, 1978, OCHI & ARAYA, 1992) , and most species of this subgenus is distributed in the tropical or subtropical regions. No species of *Parascatonomus* species, however, has ever been recorded from Miyakojima Island, the Ryukyus, Southwest Japan. Recently, some strange specimens apparently belonging to the subgenus were collected by KUSUI himself, one of the present authors, and also taken by Mr. INADA on this island by using carrion trap.

After careful examination, these specimens are classified to belong to *Onthophagus carnarius* NOMURA but have several differences enough to separate them as a new subspecies from the nominotypical one from Amami-Oshima, Okinawa and Kumejima Isls., as we describe it in this paper. The holotype will be deposited in the Osaka Museum of Natural History.

Before going further, we wish to express our hearty thanks to Mr. SATOSHI INADA (Okinawa) for kind offer of valuable specimens, and also to Mr. MASATO MORI (Hyogo) for his valuable information to us.

Onthophagus (*Parascatonomus*) *carnarius miyakoinsularis* subsp. nov.

The present new subspecies is different from the nominotypical one in the following characteristics: 1) body uniformly black, without metallic lustre, while in the nominotypical one, it has usually weak greenish or purpulish lustre on head, pronotum, pygidium and so on; 2) punctures on dorsal surface much coarser and denser, especially on pronotum; 3) hairs on elytral interstriae much shorter and sparser; 4) head with a transverse carina on vertex shorter, more strongly elevated, and becoming clearly biarcuate, espescially in bigger male instead of being almost simple in nominotypical subspecies.

Length: 5.0- 6.9 mm: width: 2.5- 3.7 mm (n=65).

Type series. Holotype: ♂, Tomori, Gusukube T., Miyakojima Is., the Ryukyus, Southwest Japan, 3. X. 1994, Y. KUSUI leg. Paratypes: 3 ♂ ♂ 7♀♀, the same data as the holotype; 9♂ ♂7♀♀, Niisato, Ueno-son Vil., 7. IV. 1996, S. INADA leg.; 4♂ ♂8♀♀, the Tropical Botanical Garden, Hirara City, Miyakojima Is., 10. IV. 1996, S. INADA leg.; 16♂ ♂13♀♀, Zisagawa, Gusukube, T., Miyakojima Is., 7-10. IV. 1996, S. INADA leg.

Distribution: Miyakojima Is. , the Ryukyus, Southwest Japan.

要　約

越智輝雄・三宅義一・楠井善久：琉球列島宮古島からのヒメツヤエンマコガネの1新亜種 一 これまでツヤエンマコガネ亜属の種の記録が全くなかった宮古島から，腐肉トラップで採集されたエンマコガネを調べた結果，ヒメツヤエンマコガネであることが分かり，さらに原名亜種と明瞭に区別されうる形質を持っていることが判明したので，新亜種 *miyakoinsularis* subsp. nov. として記載した．

References

NOMURA, S., 1976. On the subgenus *Parascatonomus* from Japan and Taiwan. *Ent. Rev. Japan*, 29 (1, 2): 25-33.

ISHIDA, M., & M. FUJIOKA, 1988. A list of Lamellicornia in Japan. 1st ed., *Supplement Soc. Lamelli. Tokyo*: 62pp.

OCHI, T., 1985. Coprini and Onthophagini, Scarabaeidae. In UÉNO, S.-I., KUROSAWA, Y. & , M. SATÔ (eds.). The Coleoptera of Japan in Color., 2: 354-362. Hoikusha, Osaka. (In Japanese).

OCHI, T. , & K. ARAYA, 1992. Studies on the coprophagous beetles from East Asia. II. (Coleoptera, Scarabaeidae). *G. ital. Ent.*, 6: 79-108.

(Received May 10, 1999: Accepted May 17, 1999)

Ent. Rev. Japan, 54 (1): 37-41, June 30, 1999

A New *Trox* (Coleoptera, Trogidae) from Amami-Oshima and Okinawa Islands, the Ryukyus, Southwest Japan

TERUO OCHI
Kouhudai 5 chome, Toyono-cho, Toyono-gun, Osaka, 563-0104 Japan

and

SHIGEHISA HORI
Hokkaido Institute of Environmental Sciences
Kita 19, Nishi 12, Kita-ku, Sapporo, 060-0819 Japan

Abstract *Trox matsudai* sp. nov. is described from Amami-Oshima and Okinawa Islands, the Ryukyus, Southwest Japan. It is related to *T. uenoi* NOMURA, but can be readily recognised on the deeply notched posterior edges of meso- and metafemora and trisinuate lateral margins of pronotum.

In the present paper, we are going to describe a new species belonging to the trogid genus *Trox* FABRICIUS, 1775 from Amami-Oshima and Okinawa Islands of the Ryukyus, Southwest Japan under the name *Trox matsdai*. This is the third species of this genus from Amami-Oshima Island, and also the second species from Okinawa Island. The holotype will be deposited in the Osaka Museum of Natural History.

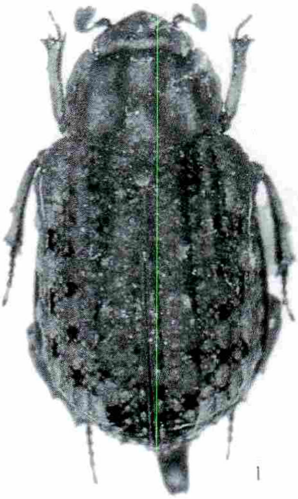
Before we proceed further, we wish to express our hearty thanks to Dr. KIMIO MASUMOTO, Mr. MASAYUKI FUJIOKA and Mr. KIYOSHI MATSUDA for giving us valuable advice, kind help and so on. We are also grateful to Mr. ITARU KANAZAWA and Mr. SHIGEHIKO SHIYAKE for giving us the opportunity to examine the valuable specimens preserved in the Osaka Museum of Natural History. Our cordial thanks are due to the following gentlemen for their kind offer of valuable materials, information and so on: Messrs. KATSUYA OYAMA, Hokkaido, YASUTAKA KAWAHARA & MASAKAZU KAWAHARA, Osaka, TETSUO MIZUNUMA, Osaka, SHINYA KAWAI, Tokyo and MASAAKI KIMURA, Okinawa. Lastly, we are also express our cordial thanks to Mr. TOORU HORIGUCHI who helped Mr. M. KIMURA to collect many specimens of the present new species from Okinawa Island.

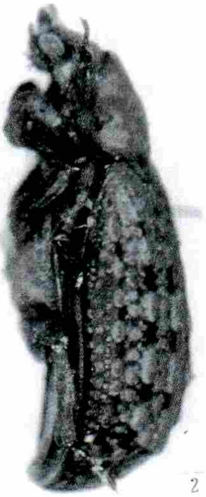
Trox matsudai sp. nov.

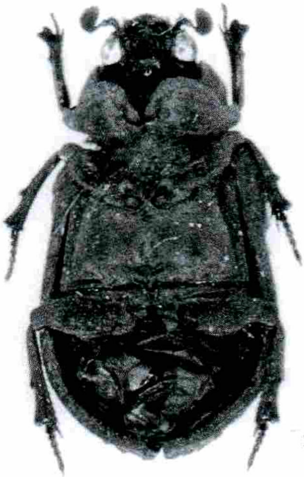
(Figs. 1-8)

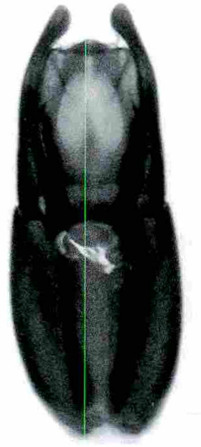
Length: 7.3-9.0 mm; width: 4.6-5.1 mm (N=5).

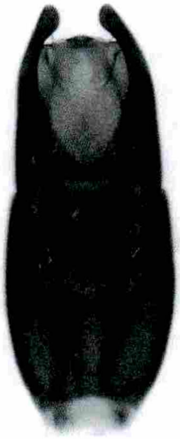
Body small, oval and strongly convex above; whole surface usually covered with earthy velvety secretions except for shining ventral side of protibiae, inner sides of meso- and metatibiae, tarsi and so on. Colour blackish brown; palpi and tarsi reddish brown; mandibles black-

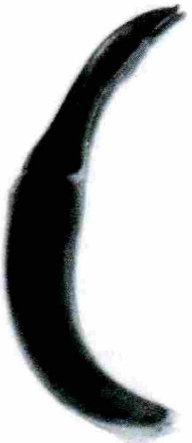

1

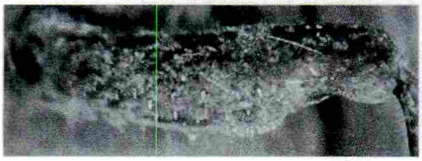

2

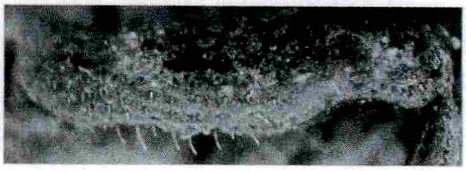

3


4


5


6


7


8

Figs. 1-7. *Trox matsudai* sp. nov., male from Amami-Oshima Island. 1: habitus, dorsal view; 2: habitus, lateral view; 3: habitus, ventral view; 4: aedeagus, dorsal view; 5: aedeagus, ventral view; 6 : aedeagus, lateral view; 7: left mesotibia in ventral view. Fig. 8. *Trox uenoi* Nomura from Amami-Oshima Island, left mesotibia in ventral view.

ish brown; antennae reddish brown, with scapes darker and club-segments paler.

Male. Head transverse, widely subpentagonal; clypeus widely and triangularly produced forwards, with apex obtusely angulate at the middle; frons with two widely separated small obtuse longitudinal elevations just behind each antennal insertion; vertex bearing four small tuber-cles in a transverse row, two median ones a little separated, and sometimes a little larger than the rest: whole margins rather sparsely fringed with long fine yellowish brown hairs. Eyes large, well protruding laterally.

Pronoturn transverse, well convex dorsally, about 1.39-1.45 times as wide as long (N= 5), and widest a little before base; anterior margin widely arcuate; lateral margins usually trisinuate but sometimes bisinuate, the basal sinuation very deep just before posterior angles, the median one slight to rather deep and the apical one slight to very slight, often almost straight; basal margin widely and subtriangularly produced backwards and forming a slightly rounded lobe at the middle, with a fine marginal furrow, which is becoming finer or obsolete at the middle; all margins except for anterior one somewhat closely fringed with pale yellowish white flattened setae; anterior angles sharp, strongly protruding forwards; posterior angles distinct, well pro-truding laterally though subrectangular; disc with six concavities surrounded by strongly ele-vated obtuse ridges; ante-scutellur concavity subrhombic, a pair of baso-lateral ones subcircular, antero-median one subtrapezoidal, and a pair of antero-lateral ones transverse. Scutellum small, tongue-shaped.

Elytra about 1.18-1.23 times as long as wide (N=5), widest at apical 4/10 to 5/10; each humeral callus well prominent and rounded, without a humeral tooth; lateral margins almost smooth throughout, a little closely fringed with very short brownish setae; disc with ten punctate-striae; each stria neither distinctly impressed nor finely ridged on either side, with strial punctures rather coarse, slightly but clearly larger than those of *T. uenoi*, and separated by about 0.6 to 1.2 times their own diameters; odd-numbered interstriae convex, and composed of oblong earthy velvety tubercles alternated with black glabrous glossy areas, the tubercles usually sparsely clothed with very short brownish setae; even-numbered interstriae not so convex, more or less uneven, obviously lower than odd-numbered ones, and also composed of small earthy velvety tubercles alternated with black narrow glossy areas, the tubercles often fused with each other, and clothed with similar short hairs as those on odd interstriae.

Prosternum with a small tooth at the middle of posterior part which is directed backwards. Meso- and metafemora each with posterior edge strongly notched at apex, the latter more deeply so than in the former. Protibia with three lateral teeth; the 1st and 2nd teeth strong and rather sharp, contiguous mutually, and placed at apex; the 3rd small, a little spaced from the 2nd.

Aedeagus. Basal piece strongly arcuate in basal half in lateral view, and a little longer than parameres. Parameres rather flat, gradually narrowed apically, with each apex flattened and slightly hollowed medially on the dorsal side; median lobe flat, clearly shorter than parameres, with apex slightly trilobed in dorsal view.

Female. Protibia with apical two teeth a little broader and more obtuse.

Type series. Holotype: ♂, Hatsuno, Amami-Oshima Island, the Ryukyus, Southwest Japan, 11. IV. 1971, K. MATSUDA leg.. Paratypes: 1 ♂ 2♀♀, the same locality as the holotype, 10. IV. 1971, T. MIZUNUMA leg.; 1 ♂, Mt. Yui, Amami-Oshima Island, 1. V. 1984, A. KATO leg.; 1 ♂ 2♀♀, Mt. Yuwandake, Amami-Oshima Island, 22-29. IV. 1996, S. HORI & K. OYAMA leg.; 14 ♂♂ 7♀♀, ditto, 29. III-5. IV. 1998, Y. KAWAHARA & M. KAWAHARA leg.; 11 ♂♂ 9♀♀, ditto. 5-15. IV. 1998; 2 ♂♂ 3♀♀, Chuorindo, Amami-Oshima Island, 21-28. IV. 1996, S. HORI & K. OYAMA leg.; 1 ♂, Naon, Yamato V., Amami-Oshima Island, 7. IV. 1978, T. TSUTSUMI leg.; 10 ♂♂ 5♀♀, Mt. Nishimedake, Kunigami V., Okinawa Island, the Ryukyus, 3. III. 1999, M. KIMURA leg.; 3♂♂2♀♀, ditto, 1. IV. 1999; 6exs, ditto, 24. III. 1999; 2 exs, ditto, 1. III. 1999, M. KIMURA leg.

Notes. The present new species is closely related to *T. uenoi* NOMURA, but can be distinguished from it by the following characteristics: 1) meso- and metafemora each with bearing markedly deep notch at apex at posterior edge, whereas in *T. uenoi*, the notch is not so deep; 2) pronotum well convex, with the median obtuse ridges strongly elevated, whereas in *T. uenoi*, it is less convex, with the median obtuse ridges not so strongly elevated; 3) lateral margin of pronotum trisinuate, especially with the basal sinuation very deep, whereas in *T. uenoi*, it is usually bisinuate with the basal sinuation not very deep; 4) prosternum with a distinct tooth at the middle of posterior part: 5) in male, aedeagus with basal piece a little longer than parameres, whereas in *T. uenoi*, it is much longer than parameres.

This new species is collected on Amami-Oshima and Okinawa Islands, but no local difference is present between the specimens from these islands.

要約

越智輝雄・堀繁久：奄美大島及び沖縄本島からの*Trox*属の1新種，— 奄美大島及び沖縄本島から採集されたコブスジコガネ科甲虫を，*T. matsudai*として記載した．*Trox*属の種としては，本新種が奄美大島では第3番目の種となり，沖縄本島からは第2番目の種となる．奄美諸島から記載されたウエノコブスジコガネ *T. uenoi* NOMURAに近縁であるが，中・後腿節の先端部後縁に深い顕著な切れ込みを具えることや前胸背側縁が3波曲すること等で既知種，*T. uenoi* と明瞭に区別できる．

References

BALTHASAR, V. , 1931. Sechs neue Trox-arten aus dem Ussurigebiet und Transbaikalen. *Ent. Bl.*, 27: 128-134.

——— 1936. Monographie der Subfamily Troginae der palaearktischen Region. *Fetsch. E. Strand*, 1: 407-459.

LEWIS, G. , 1895. On the lamellicorn Coleoptera of Japan, and notices of others. *Ann. Mag. nat. Hist.*, (6) 18: 374-408.

ISHIDA, M., & M. FUJIOKA, 1988. A list of Lamellicornia in Japan. 1st ed. *Suppl. Soc. Lamellic.* , *Tokyo*: 62 pp.

MASUMOTO, K. & M. KIUCHI, 1995. A new *Trox* species (Coleoptera. Trogidae) from Amami-Oshima of the Nansei Islands, Southwest Japan. *Elytra*, *Tokyo*, 23(2) : 205-208.

MIYAKE, Y. , 1986. In the present taxonomyies[sic] of the Japanese Trogidae and their points at issue (Col. Scarabaeoidea). *Kita-kyushu no Konchu*, 33: 139-144. (In Japanese)

——— & S. YAMAYA, 1995. Some new beetles belonging to Scarabaeoidea (Insecta, Coleoptera, Trogidae, Geotrupidae and Scarabaeidae) preserved in the Nagaoka Municipal Science Museum. *Bull. Nagaoka. Mnc. Sci. Mus.*, 30: 31-40.

MOTSCHULSKY, V. , 1869. Insect du Japon. *Etude ent.*, I : 1-42.

NAKANE T. , 1951. On the Scarabaedae of Japan(1). *Ent. Rev. Japan*, 5: 97-100. (In Japanese)

——— 1954. New or little known Coleoptera from Japan and its adjacent regions. X. *Trans. Shikoku ent. Soc.* , 4: 7-15.

——— 1963. Trogidae. In NAKANE, T. , et al. (eds.), Icon. Ins. Japon. Col. nat ed., 2: 113-114.

——— 1983. New or little-known Coleoptera from Japan and its adjacent regions, 46. *Fragm. Coleopt., Kagoshima*, (35-37): 139-152.

——— & K. TSUKAMOTO, 1955. On the family Trogidae in Japan. *Akitsu, Kyoto*, 4: 85-92. (In Japanese with English summary)

NOMURA, S., 1937. On the genus *Trox* of Japan (Scarabaeidae) with description of a new species. Nippon no Kochu, 1: 77-86. (In Japanese)

——— 1961. Some new species of the Coleoptera from Japan. *Toho-Gakuho, Kunitachi*, (11): 70-89.

PAULIAN, R. . 1945. Coléptères Scarabéides de l'Indochine. *Fn. Emp. fr.* , 3: 1-225. Larose, Paris.

PITTINO, R. , 1985. Four new Oriental species of the genus *Trox* (s. str.) F. , Coleoptera, Trogidae. *G. it. Ent.*, 2: 327-340.

WATERHAUSE, C. O., 1875. On the Lamellicorn Coleoptera of Japan. *Trans. ent. Soc. London*, 1875: 71-116.

(Received May 10, 1999: Accepted May 17, 1999)

Ent. Rev. Japan, 54 (1): 43-60, June 30,1999

Six New Species of the Trichotichine Subgenus *Amaroschesis* from Sichuan (Coleoptera: Carabidae: Harpalini)

By NOBORU ITO
1-7-18 Higashiuneno, Kawanishi City, Hyôgo Pref., 666-0117 Japan

Abstract Six new species of the subgenus *Amaroschesis* TSCHITSCHÉRINE of the genus *Trichotichnus* MORAWITZ are described from Sichuan, China.

As pointed out in previous several papers, the diversity of species in the trichotichine subgenus *Amaroschesis* TSCHITSCHÉRINE is so pronounced as to describe many species from Sichuan, Gansu and Yunnan last year (N. ITO, 1998a, 1998c-in press, and 1998d; KATAEV et N. ITO, 1998-in press) and six new species are added in this paper from the additional materials taken in Sichuan, China.

New species are *Trichotichnus* (*Amaroschesis*) *angustatostriatus*, *T.* (*A.*) *insignangularis*, *T.* (*A.*) *kazuyukii*, *T.* (*A.*) *nobuyoae*, *T.* (*A.*) *nigrotibialis*, and *T.* (*A.*) *puntaticollis*. In the species of the subgenus, several characteristics, which are usually steady, are observed to be variable, for ex-ample, the number of spines along the external margins of stylus are variable in *T. nigrotibialis*.

I wish to express my deep gratitude to Dr. FRITZ GUSENLEITNER of the Oberösterreichisches Landesmuseum, Linz for his kind loan of SCHAUBERGER's types under his care and to Mr. TAICHI SHIBATA, Nishinomiya for his kind and continuous guidance on my taxonomic study. Also I heartily thank Mr. SEIJI MORITA, Tokyo for his kind loan of materials.

My special thanks are due to Mr. KAZUYUKI MARUBAYASHI, father of my wife in Minami-azumi-gun, and NOBUYO ITO, my mother in Kawanishi for their kind support in various ways to whom *T. kazuyukii* and *T. nobuyoae* are dedicated, respectively.

Concerning the measurement of size, refer ITO 1998b.

Abbreviations of depository of the types

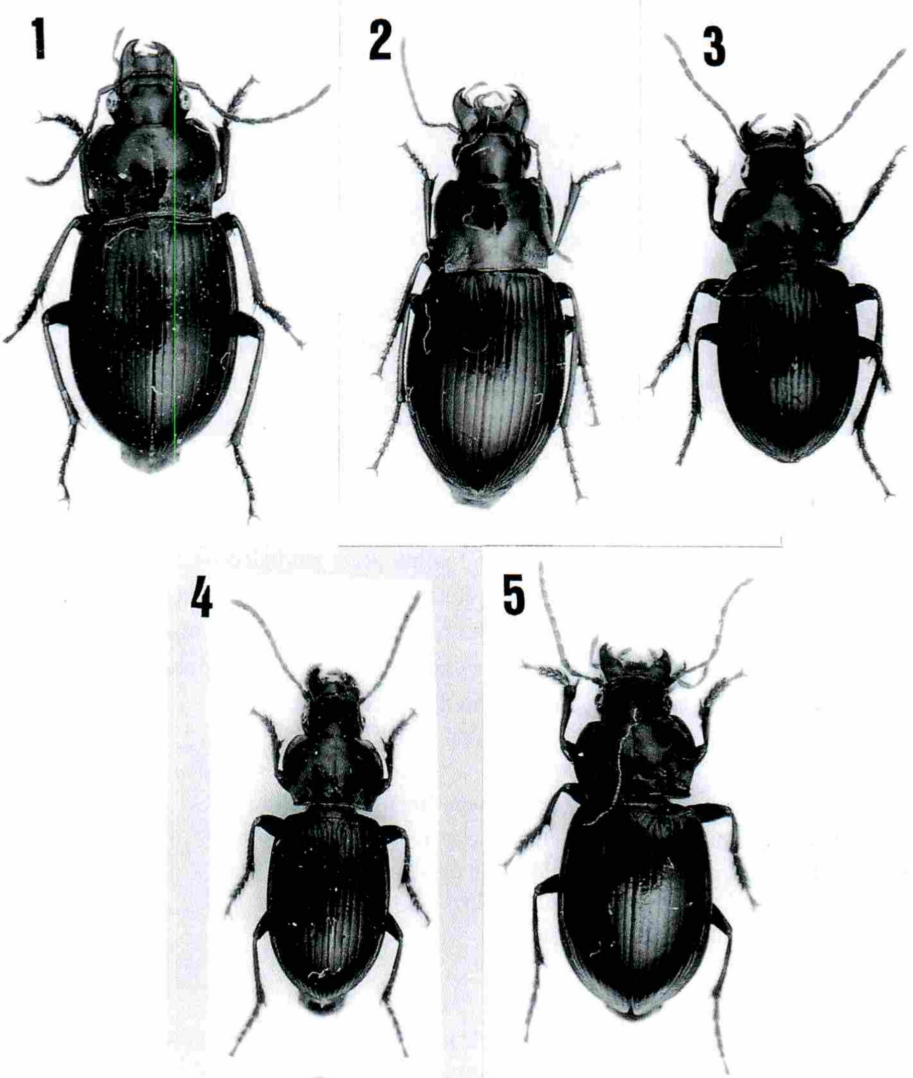
OLMc: The collection of the Oberösterreichisches Landesmuseum, Linz.
OMNHc: The collection of the Osaka Museum of Natural History, Osaka.
SMc: The collection of Mr. SEIJI MORITA, Tokyo.
NIc: The author's collection, Kawanishi.

Trichotichnus (*Amaroschesis*) *angustostriatus* N. ITO, sp. nov.

(Fig.1, 6 & 7-A)

Body robust, rather thick, weakly guard-shaped, black to slightly brownish black, not iridescent; palpi, antennae and legs light reddish brown, mandibles and labrum dark brown.

Head gently to moderately convex, relatively narrow, a little smaller than two-thirds as wide as the pronotal width (0.63-0.64 in ratio), wide at interocular space which is seven-tenths of the width of head, with very fine and sparse punctures; labrum subtrapezoidal, weakly emarginate at apex; clypeus thin to rather thick, vaguely transversely depressed in apical third, clearly and thinly ridged at outside of each lateral pore, with apex weakly emarginate; clypeal suture fine and obscure, redeced medially or laterally in individuals; frontal impressions straightly divergent posteriorly, shallow, and obliterated a little before eyes; eyes not large and weakly prominent; temples rather tumid, subarcuately or rarely almost straightly contracted towards neck constriction; mandibles more or less long, sharpened apicad, terebral tooth of left mandible roundedly produced and that of right one only swollen, retinacular tooth of left one samll and narrowly triangular, and that of right one large and regular triangular; antennae slender and



Figs. 1-5. Habitus of the subgenus *Amaroschesis* TSCHITSCHÉRINE of the genus *Trichotichnus* MORAWITZ spp. 1, *Trichotichnus* (*Amaroschesis*) *angustatostriatus* N. ITO, sp. nov.: 2, *T.* (*A.*) *insignangularis*N. ITO, sp. nov.; 3, *T.* (*A.*) *kazuyukii* N. ITO, sp. nov.; 4, *T.* (*A.*) *nobuyoae* N. ITO, sp. nov.; 5, *T.* (*A.*) *nigrotibialis* N. ITO, sp. nov.; 6, *T.* (*A.*) *puncticollis* N. ITO, sp. nov.

short, only 11th segment surpassing the pronotal base, 3rd segment pubescent in apical two-thirds, one-eighth longer than 4th and about twice the 2nd; 3rd segment of labial palpus comparatively massive, 2rd one and one-tenth as long as 3rd; ligula wide, expanded distad, sharply protrudent laterad at apical angles, with apex truncate though shallowly sinuate in one example; paraglossae narrow, prolonged a little beyond ligula, free from it before its angles; mentum clearly sutured with submentum, median tooth long and narrow triangular, epilobes narrow and parallel-sided; surface rather clearly isodiametrically micro-meshed apically on clypeus, obscurely squarely to subtransversely so from frons to occiput.

Pronotum subqadrate to subcordate, widest near apical three-sevenths, rather wide, 1.41-1.45 times as wide as long, fairly convex, smooth on disc, covered with sparse and minute punctures near apex and with mixtures of minute and coarse punctures on lateral furrows and basal foveae; sides moderately arcuate in front and almost straightly oblique behind from the widest point, shallowly sinuate before base; apex shallowly emarginate, clearly bordered throughout; base about three-tenths wider than the apex, truncate or subemarginate, thickly bordered lengthwise; apical angles roundedly and weakly protudent forwards; basal angles rectangular, hardly prominent laterad at tips; lateral furrows narrow in apical two-fifths, thence gradually widened basad, linked with basal foveae, which are flattened and with small and shallow concaves insides; front transverse impression relatively deep, but hind one obsolete; median line fine, shallow and reduced near apex and base; microsculpture vague on disc, consisting of mixtures with isodiametric and square meshes in the front transverse impression, lateral furrows and basal

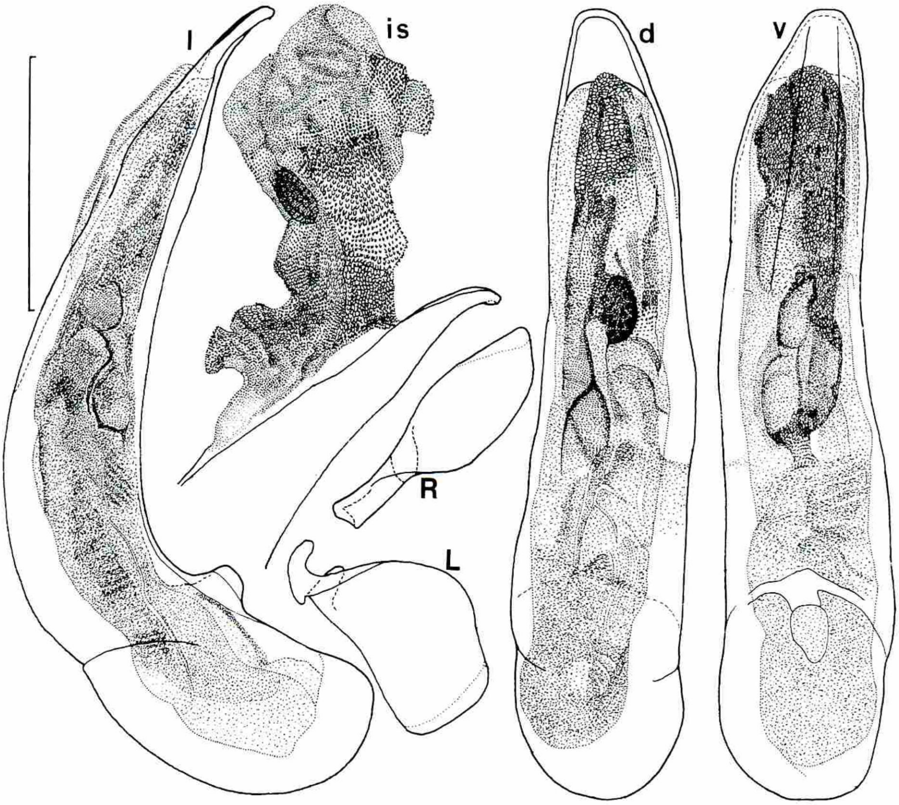


Fig. 6. Male genitalia of *Trichotichnus* (*Amaroschesis*) *angustatostriatus* N. Ito, sp. nov. l, lateral aspect; d, dorsal aspect; v, ventral aspect; L, left paramere; R, right paramere; is, inner sac. Scale: 1 mm.

foveae.

Elytra uniformly convex, oval, about one and one-third as long as wide (1.33-1.38 in ratio), about one-third wider than the pronotal width, with very sparse and fine puncture; sides gently arcuate from humeri to apical fourth, thence gradually strongly convergent distad, with

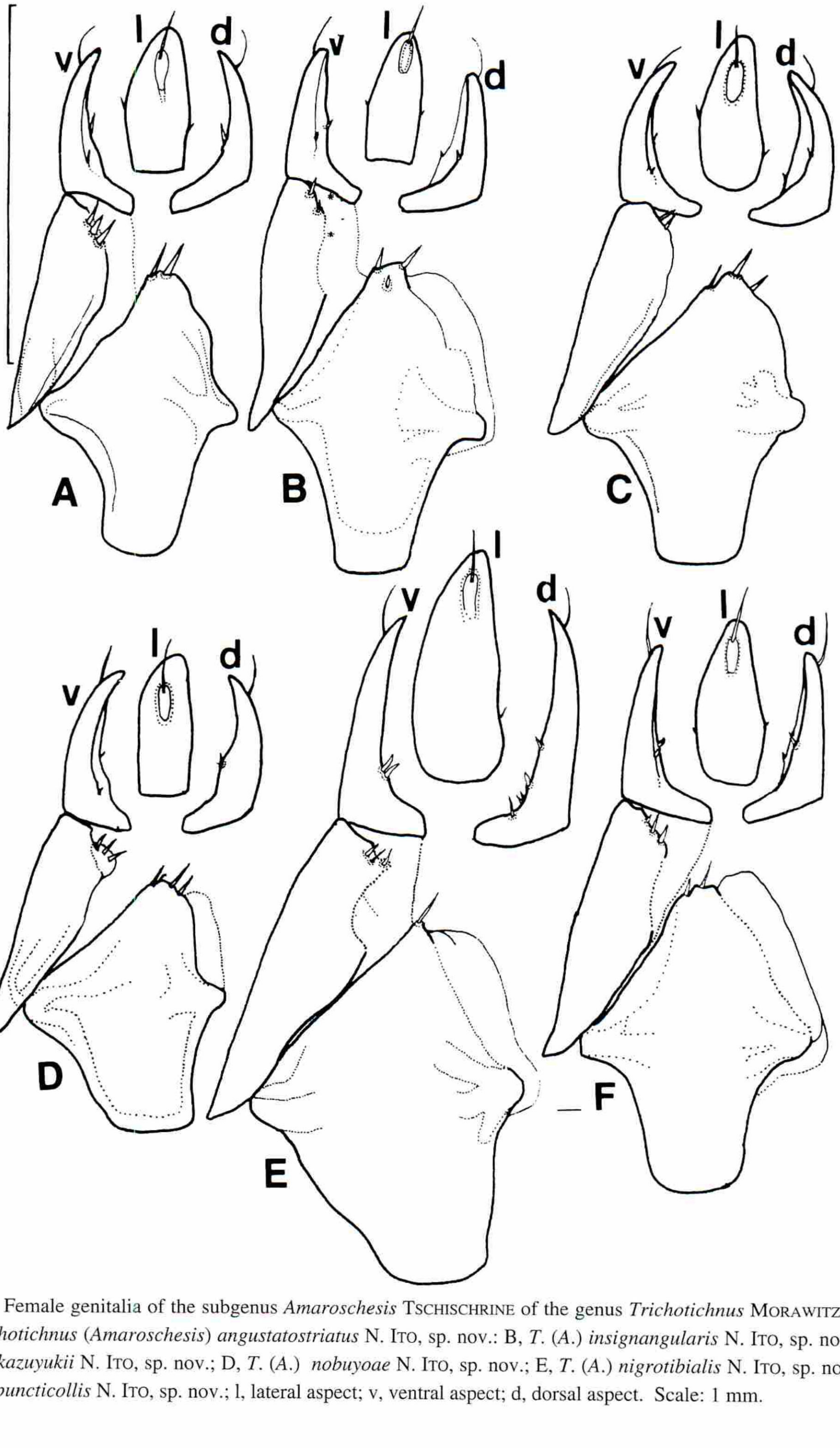


Fig. 7 Female genitalia of the subgenus *Amaroschesis* TSCHISCHRINE of the genus *Trichotichnus* MORAWITZ spp. A, *Trichotichnus* (*Amaroschesis*) *angustatostriatus* N. ITO, sp. nov.: B, *T.* (*A.*) *insignangularis* N. ITO, sp. nov.; C, *T.* (*A.*) *kazuyukii* N. ITO, sp. nov.; D, *T.* (*A.*) *nobuyoae* N. ITO, sp. nov.; E, *T.* (*A.*) *nigrotibialis* N. ITO, sp. nov.; F, *T.* (*A.*) *puncticollis* N. ITO, sp. nov.; l, lateral aspect; v, ventral aspect; d, dorsal aspect. Scale: 1 mm.

very shallow preapical sinus; apices narrow and fairly protrudentposteriorly, closed or very narrowly separated to each other, subannulate at tips; bases each very shallowly emarginate; humeral angles angulate, larger than rectangle, and not protrudent forwards; striae fine, shallow, but clearly impressed, finely crenulate; intervals flat on disc, weakly raised near apices and bases, a dorsal pore of 3rd interval situated a little before or behind the middle, adjoining or narrowly isolated from 2nd stria; marginal series continuous, though each interval between pores a little wider in middle, composed of 22-26 umbilicate pores; microsculpture obscure, visible as fine transverse lines. Hind wings well vestigial, one-fifth of elytral length.

Ventral surface almost smooth, vaguely and sparsely punctate on pro-, meso- and metepisterna, with sparse and short pubescence medially on pro- and metasterna and on 2nd and 3rd abdominal sternites; metepisterna short, 0.83-0.85 times as long as wide; 6th abdominal sternite subtruncate in ♂ and clearly arcuate at apex in ♀, bisetose at each side in both sexes.

Hind femur bi- or trisetose along hind margin; fore tibia bi- or trispinous along apico-lateral margin, not sulcate and seriately setose in apical half on dorsal surface, with apex truncate and minutely protuberant at middle, terminal spur long and edentate; 1st mid tarsus in ♂ having adhesive squamae only at apx, hind tarsus in ♂ as long as and one-tenth to one-seventh shorter in ♀ than the width of head, 1st segment two-thirds as long as 2nd and 3rd taken together, 3rd four-fifths of 2nd and one and a half of 4th, claw segment tri- or quadrisetose along each ventral margin.

Aedeagus (Fig. 6) more or less robust, gently arcuate medially, rather strongly curved and thinned at apex, hardly hooked ventrally at tip; apical orifice rather widely open, inner sac with a small sclerite weakly humped; apical lobe subtrapezoidal, widely rounded at distal margin; ventral surface ridged at both sides in apical third. Stylus (Fig. 7-A) gently curved outwards, a short spine of dorso-external margin situated at middle and that of ventro-external one near base; basal segment uni- to trisetose apico-externally; valvifer bisetose at apex.

Length: 9.8-11.0 mm. Width: 4.2-4.8 mm.

Holotype: ♂, pass 20 km South from Muli (Bowa), 27.45 N, 101.13 E, alt. ca 3,500 m, mixed forest, South Sichuan, China, 28-29. VI. 1998, JAROSLAV TURNA leg. (preserved in OLMc). Paratypes: 4 ♂♂, 5♀♀, same data as the holotype (preserved in NIc); 1♀, Xiandi, 3,240 m, Muli-xian, Northwest Sichuan, China, 26-30. IV. 1996. (preserved in SMc).

This new species is allied to *Trichotichnus* (*Amaroschesis*) *foveicollis* N. ITO, 1998 (1998d), but is distinguished from the latter by the pronotum a little more convergent forwards, the elytra more wide and the humeral angles not produced forwards. Also the new species is also similar in shape of pronotum to *Trichotichnus* (*Amaroschesis*) *brevicollis* N. ITO, 1998 (1998d), but the head is a little larger, the pronotum is weakly sinuate before base instead of being straight, more convex and concave in basal foveae.

Trichotichnus (*Amaroschesis*) *insignangularis* N. ITO, sp. nov.

(Figs. 2, 7-B, & 8)

Body oblong, black, shiny, with very weakly iridescent lustre on elytra; palpi, antennae, tibiae and tarsi reddish brown and a little lighter in palpi and antennae, mandibles dark reddish brown, femora blackish brown.

Head moderate-sized, two-thirds the pronotal width, gently raised, very sparsely punctulate, with several short, vague and transverse rugosities on frons; labrum trapezoidal, subtriangularly emarginate at apex; clypeus depressed between a pair of lateral pores, weakly transversely elevated behind the depression, weakly produced at front corners, clypeal suture clear and comparatively deep; frontal impressions relatively deeper than usual, straightly divergent posteriorly, gradually shallowed towards eyes, but not obliterated; eyes gently convex, relative-ly large; temples short, rather steeply contracted towards neck constriction; genuine ventral mar-gin of eye widely separated from buccal fissure; mandibles similar in shape and robustness to the previous new species, terebral tooth of left mandible minutely and roundedly produced and that of right one indistinct, retinacular tooth of left one widely triangularly protrudent and that of right one narrowly so and blunt at tip; antennae slender, only apical segments reaching elytra, 3rd segment almost equal in length to 4th and one and three-fourths of 2nd; 3rd segment of labial palpus somewhat tumid, as long as 2nd; ligula wedge-shaped, smaller at apical corners than rectangle, truncate at apex; paraglossae rather wide, not prolonged forwards beyond ligula, widely incised near apices; mentum moderate in shape and largeness, median tooth regular-triangular, feebly arcuate at lateral margins, epilobes narrow and weakly expanded medially; surface clearly microsculptured, isodiametrically meshed on the clypeal depression and between supraorbital pores and occiput, and squarely or subtransversely so on the remaining portions.

Prontum subcordiform, widest at apical two-thirds, about a half wider than long (1.42-1.53 in ratio), rather convex to more or less flattened on disc; sides rather strongly arcuate in front and straightly sloping posteriorly from the widest point, widely and shallowly sinuate before base; apex shallowly emarginate, base 1.21-1.30 times as wide as the apex, more weakly emarginate, slightly oblique and hardly arcuate at sides, and subarcuate in middle half, both margins entirely bordered and thick in the basal border; apical angles widely rounded; basal angles smaller than rectangle, protrudent laterad; lateral furrows each narrow, weakly and gradually widened basad, and isolated from basal fovea by weak convexity, the fovea small and longitudinally oblong; front and hind transverse impressions shallow; median line fine, shallow, lying between both the impressions; dorsal punctures smooth on disc, sparse and minute on surrounding potion of disc, coarse and dense in lateral furrows and basal foveae where those are partly confluent; microsculpture fine and clear, consisting of mixture with subsquare and transverse meshes.

Elytra oval, one-fourth to two-fifths wider than wide, uniformly well convex, without or with several minute punctures; humeri weakly curved, very obtuse and angulate at the angles; preapical sinus very shallow; apices more or less narrow, relatively protrudent posteriorly, narrowly rounded at tips which are closed or narrowly separated to each other; bases straight or hardly emarginate; striae not fine, rather deep, and gradually becoming a little deeper, scutellar striole long; intervals flat or weakly raised, a dorsal pore situated near middle; marginal series narrowly interrupted in middle, composed of (8-12) + (12-15) umbilicate pores; surface vaguely on disc and clearly microlined on apico-lateral portions. Hind wings reduced, one-fifth of the elytral length.

Ventral surface almost impunctate, vaguely and sparsely punctate on pro- and metepisterna and lateral and median portions of metasternum, sparsely pubescent medially on pro- and metasterna and 2nd and 3rd abdominal sternites; metepisternum short, seven-tenths times as long as wide; 6th abdominal sternite in ♂ almost truncate at apex and unisetose at each side and in ♀ clearly arcuate and bisetose, relatively.

Legs long; hind femur bisetose along hind margin; fore tibia slim, uni- or bispinous along apico-external margin, without dorsal sulcus; tarsi comparatively long, fore and mid tarsi in ♂ not wide, adhesive squamae of 1st mid tarsal segment in ♂ furnished only at apex, hind tarsus slightly longer in ♂ and about one-tenth shorter in ♀ than the width of head, 1st segment about seven-tenths times as long as 2nd and 3rd taken together and one-fourth longer than 2nd, 3rd a half longer than 4th, claw segment tri- or quadrisetose along each ventral margin.

Aedeagus (Fig. 8) robust, gently arcuate, thinned at apex whose tip is not thickened and directed obliqo-ventrad; apical orifice wide near apex, inner sac with a small sclerotized disc (unobservable in the preparation mounted by the Canada Balsam); apical lobe triangular, narrowly rounded at tip; ventral surface bordered at sides, concave and bearing several ridges between the borders. Stylus (Fig. 7-B) short, stout, very weakly curved, with a small spine along each outer margin; basal segment bisetose apico-externally; valvifer bisetose at apex, sometimes with an additional tiny seta before apex.

Length: 10.2-11.1 mm. Width: 4.6-5.0 mm.

Holotype: ♂, Mts. Daliang Shan, 28.25 N, 103.17 E, pass 15 km Northeast from Meigu, road Meigu to Leibo, South Sichuan, China, 26. VII. 1998, Jaroslav Turna leg. (preserved in OMNHc). Paratypes: 2 ♂ ♂, 2 ♀ ♀, same data as the holotype (preserved in NIc).

The new species is allied to *Trichotichnus* (*Amaroschesis*) *oreas* (Bates, 1891), but is distinguished from the latter by the body wider, the eyes more prominent, the pronotum more deeply sinuate before base and the legs lighter in color.

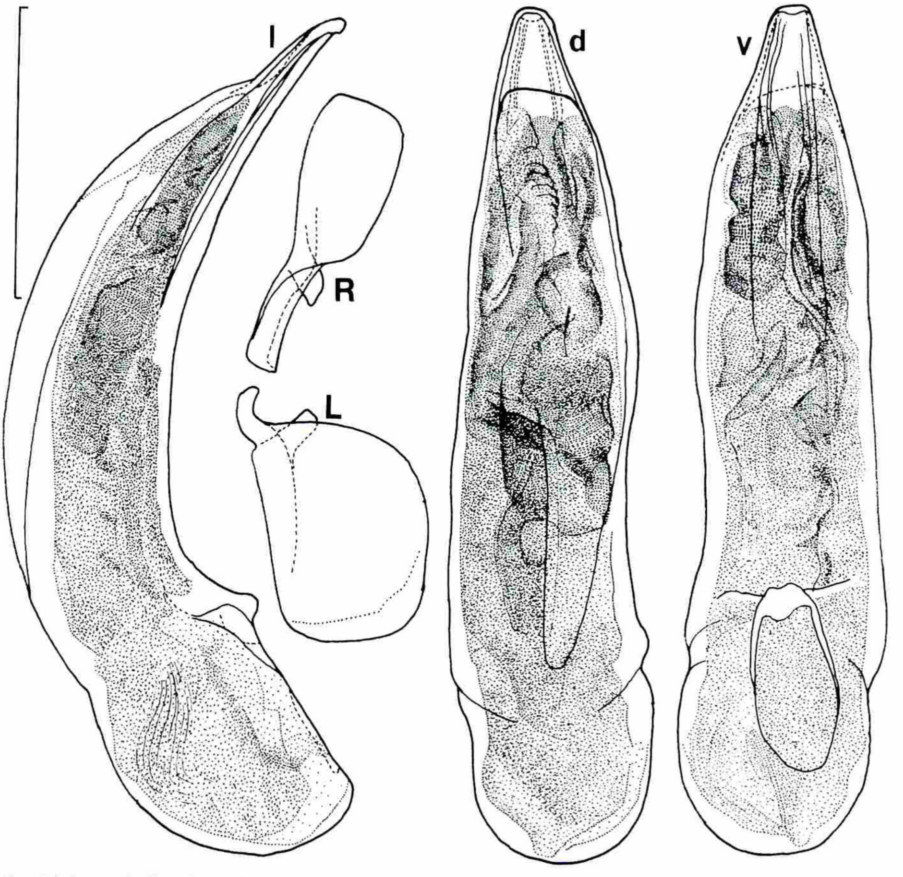


Fig. 8 Male genitalia of *Trichotichnus* (*Amaroschesis*) *insignangularis*N. Ito, sp. nov. l, lateral aspect; d, dorsal aspect; v, ventral aspect; L, left paramere; R, right paramere. Scale: 1 mm.

Trichotichnus (*Amaroschesis*) *kazuyukii* N. ITO, sp. nov.

(Figs. 3, 7-C, & 9)

Body widely oblong, similar in shape to the amarine species of the subgenus *Bradytus* STEPHEN, black, shiny, hardly opaque on elytra in ♀, on elytra with very slightly iridescent lustre and sometimes with hardly greenish to purplish aeneous ting; labial palpi yellowish brown, labrum, antennae and lateral margins of pronotum light brown, tarsi brown, legs blackish brown.

Head comparatively small, 0.61-0.65 times as wide as the pronotal width, rather raised on vertex, with very sparse and minute punctures; labrum arcuate at sides, shallowly emarginate at apex; clypeus transversely depressed between a pair of lateral setae where longitudinal rugosities are engraved, gently elevated behind the depression, weakly protrudent at apical corners; clypeal suture fine and obscure lengthwise; frontal impressions also obscure, obsolete in some examples, shallow, obliterated before eyes; eyes not or weakly prominent; temples each somewhat bulging, a little less than two-fifths of eye length; space between genuine ventral margin of eye and buccal fissure fairly wide; mandibles moderate in length and sharpened distad, terebral tooth of left mandible weakly and roundedly produced and that of right one only humped, retinacular tooth of left one minute and angulate and that of right one triangularly produced; antennae not in ♀ or a little in ♂ surpassing elytral base, 3rd segment pubescent in apical half, as long as 4th and three-fifths longer than 2nd; palpi not slender; ligula wide, expanded forwards before truncate apex; paraglossae narrow, not or slightly prolonged beyond ligula, fused with ligula to the expantion from base; mentum possessing a narrowly triangular and long median tooth, epilobes narrow, weakly arcuate at inner sides; microsculpture relatively clearly carved, observed as isodiametric meshes on apical area of clypeus and as mixtures with square and subtransverse meshes on the remaining areas.

Pronotum quadrate, widest a little behind apical two-fifths, about a half wider than long (1.44-1.53 in ratio), weakly roundedly contracted apicad and basad and the roundness weaker in basal portion than apical one, somewhat strongly decivous latero-apicad, transversely and vaguely rugose on central area and longitudinally so in front transverse impression, smooth on disc, sparsely and coarsely punctate along apex and in lateral furrows and basal foveae; apex trapezoidally emarginate; base three-tenths wider than the apex, shallowly emarginate and hardly arcuate at sides or straight throughout; all margins entirely bordered; apical angles well protrudent and widely rounded; basal angles a little larger than rectangle, angulate and not or very slightly toothed at tips; lateral furrows narrow in apical half and weakly widened basad in basal half; each basal fovea not large, rounded, and isolated from the furrow by a weak convexity; front transverse impression rather deep, fairly long or short, the hind one obsolete or shallowly engraved; median line fine, more or less deep, reaching near apex and base; microsculpture finely meshed, isodiametrical near apex, and square to transverse on the remaining portions.

Elytra short, widely elliptical, one-third longer than wide (1.31-1.35 in ratio), one-fifth wider than the pronotal width, ovally convex, not punctate, hardly iridescent on elytra; sides gently or somewhat strongly arcuate in humeri, with very shallow preapical sinus; apices not prominent, feebly arcuate at outer margins, narrowly separated to each other at tips; bases shallowly emarginate; humeral angles very obtuse, angulate or hardly blunt; striae fine, uniform or irregular in width, fairly to well shallow, finely crenulate, scutellary striole short; intervals weakly convex to flat, becoming a little more convex apicad, a dorsal pore of 3rd interval situated between apical two-and three-fifths; marginal series not interrupted, but spaces between umbilicate pore in middle are a little wider than the others, consisting of 19-21 pores; microsculpture comparatively clear, observable as transverse mehses. Hind wings well reduced, one-tenth of elytral length.

Ventral surface almost smooth, sparsely and vaguely punctate laterally on metasternum and metepisterna, very sparsely covered with short pubescent medially on metasternum and 2nd and 3rd segments; metepisternum short, three-fourths times as long as wide; 6th abdominal segment widely rounded at apex and bisetose at each side in both sexes.

Hind femur usually bisetose or rarely trisetose along hind margin; fore tibia slender, trispinous apico-externally, and without sulcus, terminal spur short and lanceolate; tarsi glabrous on dorsal surface, 1st mid tarsal segment in ♂ squamose only at apex, hind tarsus various in length, 0.92-1.08 times in ♂ and 0.80-0.83 times in ♀ as long as the width of head, 1st segment short, 0.63-0.68 times of 2nd and 3rd taken together, 3rd segment 0.86-0.89 times of 2nd and three-sevenths to three-fourths longer than 4th, claw segment tri- or quadrisetose along each ventral margin.

Aedeagus (Fig. 9) clearly arcuate, gradually tapered distad, not thickened at apex; apical orifice wide in apical third, sclerite lacking on inner sac; apical lobe quadrate, widely and slightly rounded; ventral surface bordered at sides, concave along middle. Stylus (Fig. 7-C) rather

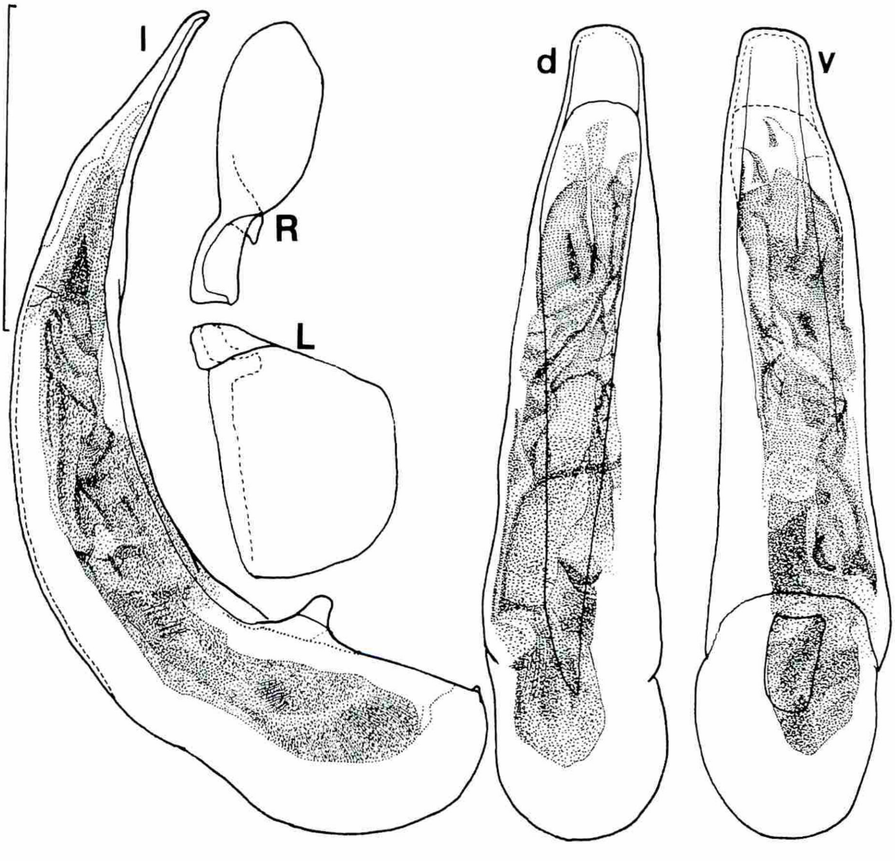


Fig. 9 Male genitalia of *Trichotichnus* (*Amaroschesis*) *kazuyukii* N. Ito, sp. nov.l, lateral aspect; d, dorsal aspect; v, ventral aspect; L, left paramere; R, right paramere. Scale: 1 mm.

well curved, with a small spine basally at ventro-lateral margin and also with it medially at dorso-lateral one; basal segment uni- or bisetose apico-externally; valvifer trisetose at apex.

Length: 8.8-10.0 mm. Width: 8.6-4.5 mm.

Holotype: ♂, pass 20 km South from Muli (Bowa), 27.45 N, 101.13 E, alt. ca 3,500 m, mixed forest, South Sichuan, China, 28-29. VI. 1998, JAROSLAV TURNA leg. (preserved in OMNHc). Paratypes: 11 ♂ ♂, 11 ♀ ♀, same data as the holotype (preserved in NIc); 1♀, 30 km Northwest from Muli (Bowa), 28.07 N, 101.05 E, 1-2. VII. 1998, JAROSLAV TURNA leg. (preserved in NIc); 4 ♂ ♂, 2 ♀ ♀, Mts. South Jinping Shan, alt. 2,700 m, 45 km Northwest from Meiyu, pass to Bowa, Sichuan, China, 18. VI. 1998. (preserved in NIc).

The present new species is distinguishable from the other species of the subgenus by the pronotum arcuate at sides and the elytra clearly microsculptured. *Trichotichnus* (*Amaroschesis*) *obtusicollis* SCHAUBERGER, 1936 also has the microsculptured elytra, but the body is much narrower and the pronotum has the lateral furrows in a line instead of being more or less widened.

Trichotichnus (*Amaroschesis*) *nobuyoae* N. ITO, sp. nov.

(Figs. 4, 7-D, & 10)

Body narrowly oblong, rather well convex, black, shiny, not iridescent on elytra; labrum and antennae light brown, palpi yellowish brown, tarsi and tibiae reddish brown, mandibles dark reddish brown, femora blackish brown.

Head moderate in size, about two-thirds of the pronotal width (0.65-0.67 in ratio), gently to rather well convex, very sparsely punctulate; labrum weakly narrowed forwards, shallowly emarginate at apex; clypeus weakly and triangularly protrudent at apical corners, clypeal suture fine and vague, flattened in apical third, with gentle swell extending frons from basal two-thirds; frontal impressions shallow, fovea-like, reduced in middle between apices and eyes; eyes small, weak in convexity; temples gently sloping, long, two-fifths of the eye length; genuine ventral margin of eye widely distant from buccal fisure; mandibles rather long, robust, sharpened apicad, terebral and retinacular teeth moderate in prominence; antennae slender, reaching elytral bases; labial palpi slender or somewhat tumid, 3rd segment 0.91-0.92 times as long as 2nd; ligula wide, constricted in an arch, truncate at apex, with apical corners triangularly produced laterad; paraglossae narrow, prolonged forwards a little beyond ligula, free from ligula at its preapical portion; mentum clearly sutured, median tooth narrow, triangular and comparatively prominent, epilones rather wide; microsculpture fine and somewhat clear, consisting of isodiametric meshes apically on clypeus and of mixtures with square and transverse meshes on area from frons to occiput.

Pronotum subtrapezoidal, widest a little behind apical two-fifths, 1.43-1.50 times as wide as long, well convex, widely smooth on disc, scattered with somewhat coarse punctures only in lateral furrows and basal foveae; sides gently arcuate forwards and linearly oblique posteriorly from the widest point; apex more or less emarginate, subtruncate at the bottom, clearly bordered lengthwise; base 1.12-1.18 times as wide as the apex, slightly emarginate, hardly arcuate in each lateral third, with thick and uninterrupted border; apical angles narrowly rounded; basal angles a little obtuse, angulate, and triangularly and minutely toothed at tips; lateral furrows curved near apex, thence gradually and weakly expanded posteriorly; basal foveae each wide, quadrate, only flattened,longitudinally grooved inside, with a weak hump along the groove; front transverse impression relatively long, more or less deep, though sometimes shallow, the hind one much shallower; median line thin, shallow, and not reduced even near apex and base; surface finely and clearly microsculptured, isodiametrically meshed in frontal impressions, lateral furrows and basal foveae, and squarely or transversely meshed on the remaining portions.

Elytra narrowly ovate, two-fifths longer than wide (1.39-1.44 in ratio), one-fifith wider than the pronotal width, uniformly well convex, with several very minute punctures on each interval; sides weakly curved from humeri to apical fourth, thence gradually strongly convergent posteriad, with extremely shallow preapical sinus; apices not produced behind, narrowly rounded at tips, closed to each other; bases shallowly emarginate, very obtusely and angularly meeting with lateral borders; striae wholly shallow in principle, but the depth is varied in individuals, thin and irregular in width, partly interrupted in some examples, with fine and vague crenulation, scutellar striole short; intervals flat to slightly raised, a dorsal pore of 3rd interval situated between about apical two-fifths and middle; marginal series interrupted in middle, composed of (7-8) + (8-10) umbilicate pores; microsculpture clearer than usual, consisting of transverse meshes and lines. Hind wings fully vestigial, a little less than one-tenth of the elytral length.

Ventral surface quite smooth or bearing very vague and sparse punctures on pro- meso- and metepisterna, furnished with very short pubescence in same manner as the previous new species, *T. kazuyukii*; metepisternum very short, one-third shorter than wide; 6th segment of abdominal sternite in ♂ truncate at apex and unisetose ateach side and in ♀ weakly arcuate and bisetose.

Legs relatively short; hind femur bisetose along hind margin; fore tibiae rather slim, ar-

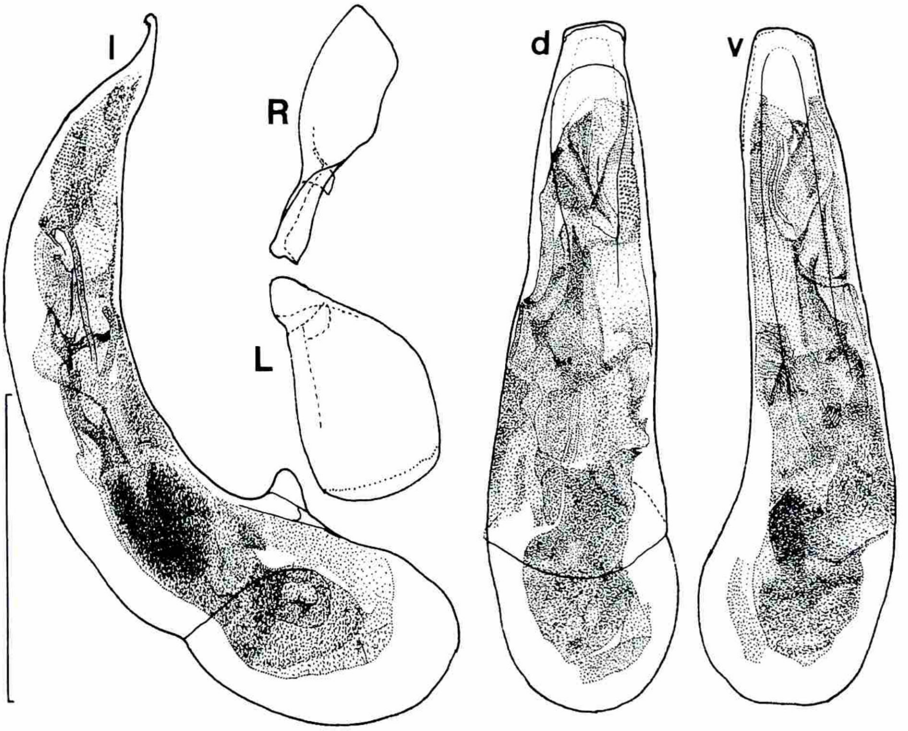


Fig. 10 Male genitalia of *Trichotichnus* (*Amaroschesis*) *nobuyoae* N. Ito, sp. nov. l, lateral aspect; d, dorsal aspect; v, ventral aspect; L, left paramere; R, right paramere. Scale: 1 mm.

ranged with three short spines along apico-external margin, not sulcate dorsally, terminal spur short and simple; tarsus short, glabrous on dorsal surface, 1st mid tarsal segment covered with biseriate squamae ventrally in apical third, hind tarsus 0.87-0.90 times in ♂ and 0.72-0.73 in ♀ as long as the width of head, 1st segment three-fourths of the 2nd and 3rd taken together and two-sevenths longer than the 2nd, 4th two-ninths shorter than the 3rd, claw segment tri- or quadrisetose along each ventral margin.

Aedeagus (Fig. 10) stout, fairly curved, thinned apically and reflected dorsad at apical tip; apical orifice wide only in apical fifth, inner sac without sclerite; apical lobe transversely quadrate, thickly bordered at distal margin; ventral surface ridged laterally, shallowly concave between the ridges. Stylus (Fig. 7-D) weakly arcuate, somewhat thick, with a tiny spine at each outer margin; basal segment bi- or trisetose apico-externally; valvifer trisetose at apex.

Length: 8.5-8.9 mm. Width: 3.6-3.9 mm.

Holotype: ♂, pass 15 km Northeast from Quianning, 30.35 N, 101.41 E, alpine meadow, road from Quianning to Dannba, Sichuan, China, 11. VI. 1998, JAROSLAV TURNA leg. (preserved in OMNHc). Paratypes: 4♂♂, 5♀♀, same data as the holotype; 1♂, 4♀♀, pass to Danba, alt. 3,000 m, 25 km Southeast from Quianning, West Sichuan, China, 10. VII. 1998. (preserved in NIc).

This new species is similar in the shape to *Trichotichnus* (*Trichotichnus*) *congruus* (MOTSCHULSKY, 1866) in spite of the different subgenus in position, but is easily discriminated from the latter by the frontal impressions obscurer, the elytra more ovate, and the microsculpture on dorsal surface much more clearly carved.

The new species is also allied to *Trichotichnus* (*Amaroschesis*) *satoi* N. ITO, (in press, 1998c) from Wase in Sichuan, but the frontal impressions are obscurer, the pronotum is more strongly convergent forwards, its apical angles more widely rounded, and the elytra are more widely ovate.

Trichotichnus (*Amaroschesis*) *nigrotibialis* N. ITO, sp. nov.

(Figs. 5, 7-E & 11)

Body widely to moderately oblong, black, shiny, on elytra subopaque and not or very weakly iridescent; palpi, margins of labrum and followings from 4th segments of antennae light reddish brown, tarsi brown to dark brown, madibles blackish brown, 1st to 3rd segments of antennae, femora and tibiae black except each apical and basal ends.

Head moderate-sized, 0.64-0.65 times as wide as the pronotal width, gently elevated at vertex and sometimes well convex, very sparsely and microscopically punctate; labrum subtrapezoidal, deeply emarginate at apex; clypeus rather thick, gently humped in basal two-thirds, longitudinally rugose near lateral pores, with apex shallowly and uniformly emarginate; clypeal suture fine and not interrupted; frontal impressions shallow, wide, linear or rounded, obliterated before eyes in some examples; interocular space wide, seven-tenths of the width of head; eyes small and not prominent; temple gently oblique, one-third of eye length; genuine ventral margin of eye widely separated from buccal fissure; mandibles thick and sharpened apicad, terebral tooth of left mandible weakly produced in a small hump and that of the right one hardly so, retinacular tooth of the left one small and blunt and that of the right one triangular and blunt at tip; antennae slender, only apical half of terminal segment surpassing pronotal base, 3rd segment slightly longer than 4th (1.06-1.08 in ratio) and twice 2nd; palpi slender, 3rd segment of labial palpus equal in length to 2nd; mentum regular-triangularly toothed at apex, epilobes very narrow, hardly dilated apicad; surface clearly and finely microsculptured, isodiametrically meshed in apical third of clypeus, transversely meshed on frons, and squarely so on vertex and its lateral portions.

Pronotum quadrate to subcordate, widest between apical two-fifths and three-sevenths, about a half wider than long (1.49-1.56 in ratio), gently declivous apico-laterally, fairly raised on disc, where fine and vague transverse rugosities are carved; sides gently arcuate apicad and straightly oblique behind from the widest point, shallowly sinuate before base; apex uniformly and rather deeply emarginate, clearly bordered lengthwise; base about one and one-fourth of the apical width (1.22-1.26 in ratio), weakly arcuate in each lateral fourth, with border entire and equal in thickness to the lateral ones; apical angles somewhat widely to rather narrowly rounded; hind angles rectangular, weakly to fairly prominent laterad at tips; lateral furrows not narrow, gradually expanded backwards; each basal fovea deep, oblong, not large, and isolated from the furrow by convexisity which is varied in highness; front transverse impression long, deep and with acute longitudinal rugosities, the hind one also deep or shallow; median line thin, shallow and reaching apex and base; dorsal punctures lacking on disc, sparse and minute near apical and lateral portions, and sparse and rather coarse in lateral furrows and basal foveae; microsculpture fine, clear at base, more strongly carved in the front impression, lateral furrows and basal foveae, detectable as mixtures of square and transverse meshes in most portions and additionally the isodiametric ones in the front impression.

Elytra oval to ovally oblong, 1.31-1.40 times as long as wide, weakly or rather well convex, without punctures; sides gently curved on humeri, weakly arcuate in middle two-thirds, inconspicuously concave before apices; apices not protrudent posteriorly, widely and weakly rounded at margins, not separated from each other, with blunt sutural angles; bases shallowly emarginate, oblique just before outer ends; humeral angles large and angulate; striae fine, shallow, a little deepened apico-laterad, finely crenulate, scutellar striole short and reaching 1st striae; intervals flat, becoming weakly convex towards apices and sides, a dorsal pore on 3rd interval variable in its presence, rarely lacking, present only at one side of elytra in individuals or normaly occuring at both sides, situated nearly in middle; marginal series consisting of 21-25 umbilicate pores, contiguous but spaces between the pores in middle wider; surface clearly and transversely microlined. Hind wings fully rudimentary, one-seventh of the elytral length.

Ventral surface impunctate or furnished with several vague punctures on metepisterna, covered with very short and sparse pubescence on median portions of pro- and metasterna and of 2nd and 3rd abdominal sternites; metepistenum short, one-fifth shorter than wide; anal segment of abdomen in ♂ truncate and in ♀ arcuately prominent at apex, and bisetose at each side in both sexes.

Hind femur bisetose in most examples; fore tibia weakly dilated forwards, bearing three short spines along apico-external margin, without sulcus, terminal spur lanceolate; tarsus glabrous dorsally and long, 1st mid tarsal segment clothed with biseriate squamae at apex, hind tarsus 1.00-1.10 times in ♂ and 0.91-0.95 times in ♀ as long as the width of head, 1st segment about three-fourths of 2nd and 3rd taken together (0.72-0.81 in ratio) and one-third longer than 2nd (1.30-0.37 in ratio), 3rd a half longer than 4th, claw segment tri- or quadrisetose along each ventral margin.

Aedeagus (Fig. 11) robust, weakly curved, thin at apex which is slightly thickened; apical orifice wide in apical fourth and narrow in basal half, sclerite lacking; apical lobe triangular,

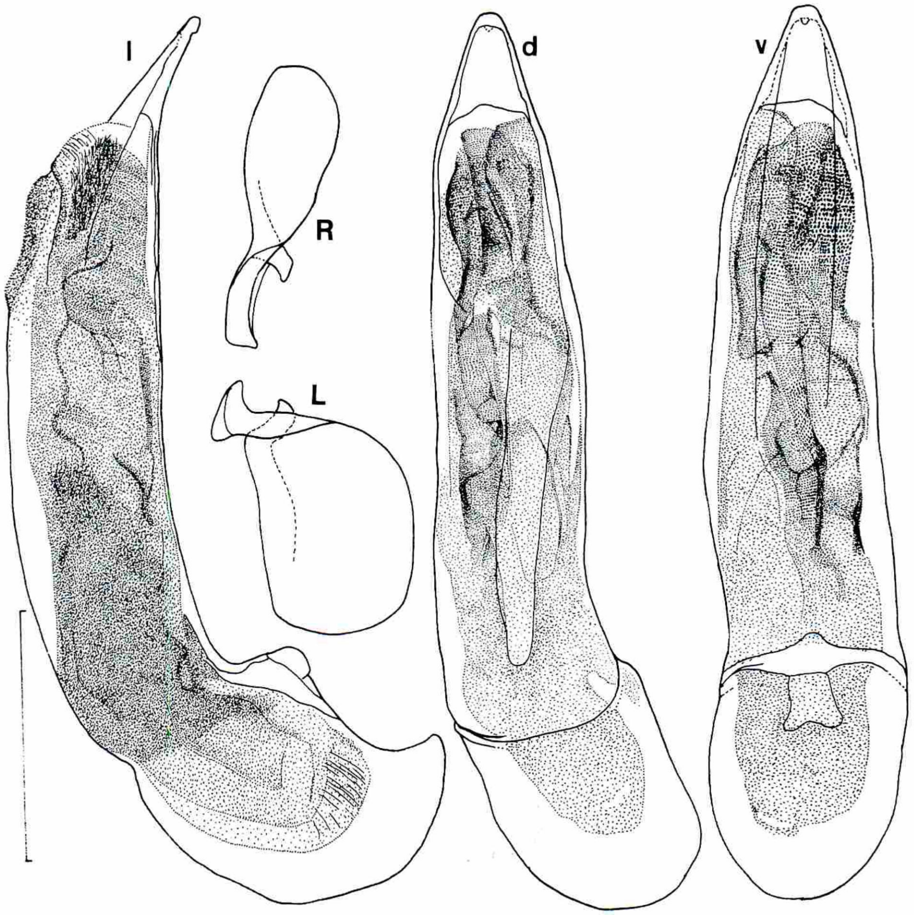


Fig. 11 Male genitalia of *Trichotichnus* (*Amaroschesis*) *nigrotibialis* N. ITO, sp. nov.l, lateral aspect; d, dorsal aspect; v, ventral aspect; L, left paramere; R, right paramere. Scale: 1 mm.

narrowly rounded at apex, and bordered at outer margins; ventral surface ridged at sides, concave between the ridges, with a very tiny hump at tip. Stylus (Fig. 7-E) weak in curvature, thin, with a seta just before apex of inner side, with one or two very small spines basally along ventral margin and two or three spines along dorsal margin between basal fourth and third; basal segment bi- or trisetose at apico-external corner; valvifer bisetose apically.

Length: 10.2-11.0 mm. Width: 4.5-4.8 mm.

Holotype: ♂, pass 20 km South from Muli (Bowa), 27.45 N, 101.13 E, alt. ca 3,500 m, mixed forest, South Sichuan, China, 28-29. VI. 1998, JAROSLAV TURNA leg. (preserved in of OLMc). Para-types: 9 ♂♂, 6♀♀, same data as the holotype (preserved in NIc); 1♂, pass 30 km Northwest from Muli (Bowa), 28.07 N, 101.06 E, alt. ca 3,500 m, mixed forest, South Sichuan, China, 1-2. VII. 1998, JARO-SLAV TURNA leg. (preserved NIc); 1♂, 2♀♀, Mt. South Jinping Shan, alt. 2,700 m, 45 km Northwest from Meiyu, pass to Bowa, Sichuan, China, 18. VI. 1998 (preserved in NIc); 5♀♀, Xiamaidi, 3,240 m, Mulixian, Northwest Sichuan, China, 26-30. IV. 1996 (preserved in SMc).

In comparison with *Trichotichnus* (*Amaroschesis*) *notabilangulus* N. ITO, 1998 (1998a) in this present new species has the body is wider, the pronotum smoother, and the elytra are more shallowly striate and microlined instead of being meshed.

The new species is very closely allied to *T.* (*A.*) *oreas*, but is different from the latter in having the pronotum more transverse, more strongly produced laterad at hind angles and more deeply grooved in basal foveae, and the elytra iridescent and with shorter scutellar striole.

Trichotichnus (*Amaroschesis*) *punctaticollis* N. ITO, sp. nov.

(Figs. 7-F, 12 & 13)

Body ovally oblong, more or less flattened, black, shiny, with weakly iridescent lustre on elytra; head slightly brownish black from clypeus to occiput, mandibles dark brown, labrum brown, palpi, antennae, lateral margins of pronotum and legs light brown.

Head small, 0.61-0.63 times as wide as the pronotal width, gently elevated on frons, very minutely and sparsely punctate, obscurely rugose on lateral portions of clypeus and near frontal impressions; labrum hardly convergent forwards, with roundedly prominent apical angles; clypeus uniformly emarginate at apex, transversely depressed between a pair of lateral setae, rather well swollen behind the depression as far as vertex; clyeal suture vague throughout; frontal impressions shallow, not linear, reduced before eyes; eyes gently hemispherical; temples somewhat steeply sloping, short, one-fifth of the eye length; genuine ventral margin of eye widely separated from buccal fissure; mandibles moderate in robustness, terebral and retinacular teeth similar in shape and prominence to the usual species; antennae slender, slightly extending beyond pronotal base; palpi rather tumid, 3rd segment as long as 2nd; ligula robust, expanded forwards behind apex, emarginate at sides, and truncate at apex; paraglossae narrow, produced a little beyond ligula; mentum regular-triangularly toothed at apex, epilobes narrow and boat-shaped; microsculpture consisting of isodiametric meshes apically on clypeus, of mixted with subtransverse and square meshes on portion from frons to occiput.

Pronotum subquadrate, widest at apical two-fifths, a half wider than long, incospicuous in convexy, with short and transverse rugosities along median line; sides strongly arcuately convergent anteriorly and straightly so posteriorly from the widest point, without basal sinus; apex clearly bordered throughout, deeply emarginate, straight at bottom of the emargination; base a little wider than one and one-third of the apex, oblique at sides, with thick and entire border; apical angles well protrudent and rather narrowly rounded; basal angles a little smaller than rectangle and produced posteriad; lateral furrows narrow, weakly and gradually widened posteriad from the middle, fused with basal foveae which are shallow, wide and minutely concave inside; front transverse impression deep and short, the hind one very short and vague; median line fine, clear, extending near apex and base; dorsal punctures lacking on disc, fine and sparse on apical and lateral portions, coarse and rather dense in lateral furrows and basal foveae where they are partly confluent; microsculpture vague and sparse on disc, observed as fine isodiametric meshes in the front impression and as vague quadrate meshes in the lateral furrows and basal foveae.

Elytra oval, two-fifths longer than wide, weakly convex, not punctate; sides gently curved in humeri, weakly arcuate in middle, shallowly sinuate before apices; apices not produced behind, widely rounded, narrowly separated from each other; bases straight, obtusely and angularly meeting with lateral borders; striae narrow, somewhat deep, finely crenulate; intervals slightly convex on disc, becoming a little more convex apicad, 3rd interval with a dorsal pore on apical three-eighths; marginal series not interrupted, composed of 21-26 umbilicate pores; surface very finely microlined except 9th intervals transversely meshed. Hind wings fully reduced.

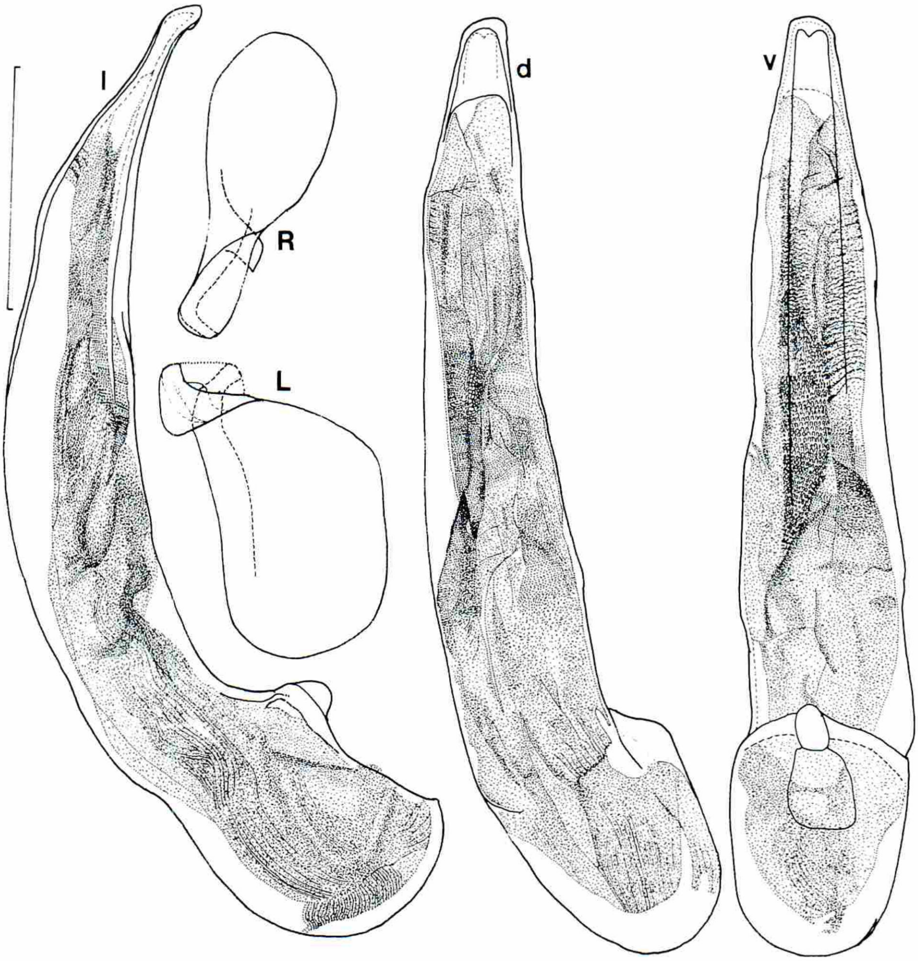


Fig. 12 Male genitalia of *Trichotichnus* (*Amaroschesis*) *punctaticollis* N. ITO, sp. nov. l, lateral aspect; d, dorsal aspect; v, ventral aspect; L, left paramere; R, right paramere. Scale: 1 mm.

Ventral surface minutely and sparsely punctate on pro-, meso- and metepisterna, sparsely pubescent medially on metasternum and 2nd and 3rd abdominal sternites; metepisternum short, five-sixths times as long as wide; 6th abdominal sternite in ♂ hardly rounded at apex and unisetose at each side, and in ♀ rather prominent and narrowly arcuate at the apex and bisetose at the side.

Hind femur trisetose along hind margin; fore tibia rather strongly dilated distad, obscurely sulcate, armed with three spines along apico-external margin and with a simple and slender terminal spur, apex truncate and minutely protuberant medially; tarsus covered with very short and sparse pubescence on dorsal surface, 1st segment of mid tarsus armed with adhesive squamae only at apex, hind tarsus about one-tenth longer in ♂ than and in ♀ as long as the width of head, 1st segment 0.63 times as long as 2nd and 3rd combined together and one-eighth longer than 2nd, 3rd segmnet about a half longer than 4th, claw segment quadrisetose ventrally along each side.

Aedeagus (Fig. 12) moderately thickened, uniformly curved, weakly constricted before apex which is ventro-obliquely directed; inner sac without any sclerites; apical lobe weakly convergent distad and subtruncate at apex; ventral surface bordered at sides, shallowly depressed medially. Stylus (Fig. 7-F) gently curved, with a short spine at each outer margin; basal segment bisetose apico- externally; valvifer bisetose at apex.

Length:12.7 mm. Width:5.6 mm.

Holotype: ♂, near Pinguchuan, alt. 2,500 m, 80 km Northeast from Yanyuan, Southeast Sichuan, China, 25-27. VI. 1998. (preserved in OMNHc). Paratypes: 1♂, 1♀, pass 15 km Southwest from Pingchuan, 27.33 N, 101.49 E, alt. ca 3,200 m, road Xichang-Yanyuan, South Sichuan, China, 26-27. VI. 1998, JAROSLAV TURNA leg. (preserved in NIc); 1♀, Mt. South Jinping Shan, alt. 2,700 m, 45 km North-west from Meiyu, pass to Bowa, Sichuan, China, 18. VI. 1998 (preserved in NIc).

This new species is similar to *Trichotichnus* (*Amaroschesis*) *jizuensis* N. ITO, 1998 (1998a) from Yunnan in the general appearance, but the pronotum is more flattened, more narrowly rounded at apical angles, and produced posteriad at hind angles, the elytra have bases not emarginate, and the fore tibiae sulcate on dorsal surface.

要約

伊藤 昇：四川省からの *Amaroschesis* 亜属の 6 新種．*Amaroschesis* 亜属の種は中国四川省及び甘粛省から雲南省にかけて分布し，多様化が顕著で昨年多数の新種が記載された．最近，筆者は四川省で採集された追加の標本を入手し，6種の新種を認めたので記載した．既に指摘されているように，この亜属の種は近縁の亜属では安定している形質がしばしば変化するが，ここに記載した *Trichotichnus* (*Amaroschesis*) *nigrotibialis* でも，通常雌の stylus 外縁に 1 本ずつある棘の数が数本あり，極めて特異である．

尚，筆者の義父丸林一之氏には，常々採集において援助していただいており，また母延代には文献収集その他側面からの研究支援を受けている．それぞれ *Trichotichnus kazuyukii* および *T. nobuyoae* として献名し，謝意を表した．

References

BATES, H. W., 1891. Coleoptera collected by Mr. PRATT on the upper Yang-tsze and second Notice. Journey of 1890. *The Entomologist, suppl.*: 69-80.

ITO, N., 1998a. Four new species of the subgenus *Amaroschesis* of the genus *Trichotichnus* from Yunnan (Coleoptera; Carabidae; Harpalini). *Ent. Rev. Japan*, 53: 21-32.

——— 1998b. Three new species of the genus *Trichotichnus* from Seram Is., the Moluccas with a note of distribution (Coleoptera: Carabidae: Harpalini). *Bull. Osaka Mus. Nat. Hist.*, 52: 49-56.

——— 1998c. Some species of the genus *Trichotichnus* from Sichuan (Coleoptera, Carabidae, Harpalini). (in press)

——— 1998d. Some species of the subgenus *Amaroschesis* from Sichuan and Gansu in China (Coleoptera: Carabidae, Harpalini). *Ent. Rev. Japan*, 53: 91-108

KATAEV et N. ITO, 1998. Eight new species of the subgenus *Amaroschesis* of the genus *Trichotichnus* from China with a redescription of T. (Amaroschesis) oreas (Coleoptera, Carabidae). (in press)

SCHAUBERGER, E., 1936. Zur Kenntnis der paläarktischen Harpalinen (Fünfzehnter Beitrage). Ueber *Trichotichnus*-Arten. *Kol. Rundsch.*, 22: 1-22.

(Received May 14, 1999: Accepted May 25, 1999)

Correction

I would like to emend the error in the following paper.

Ito, N., 1998. Some Species of the Subgenus *Amaroschesis* from Sichuan and Gansu in China (Coleoptera; Carabidae, Harpalini). *Ent. Rev. Japan*, 53: 91-108.

Error	Right
P. 94, Figs. 3-7. 5, *T.* (*A.*) *foveicollis*	5, *T.* (*A.*) *burunneomarginatus*
6, *T.* (*A.*) *mishanensis*	6, *T.* (*A.*) *foveicollis*
7, *T.* (*A.*) *brunneomarginatus*	7, *T.* (*A.*) *minshanensis*
P. 97, pl. 15. Paratypes: 4♂♂, 3♀♀,	Paratype: 14♂♂, 10♀♀,
P. 107, pl. 8. Åâisetose	unisetose
P. 107, pl. 15 第六腹板の数が	第六腹板の側縁剛毛数が

Ent. Rev.Japan, 54 (1): 61-64, June 30, 1999

A New Species of the Genus *Trigonorhinus* from Japan (Coleoptera: Anthribidae)

KATSURA MORIMOTO
c/o Entomological Laboratory, Faculty of Agriculture,
Kyushu University, Fukuoka, 812-8581 Japan

Abstract *Trigonorhinus japonicus* sp. nov. is described from Japan as the second species of the genus from the eastern Palaearctic region.

The genus *Trigonorhinus* had been treated as either a synonym or subgenus of the *Brachytarsus* or *Anthribus* until the redifinition was given by VALENTINE (1957, 1960). This genus contains 26 species on record, of which 24 species are known to occur in the New World from Canada to Argentine and only two species are found in the Old World, *T. areolatus* (BOHEMAN, 1845) from the Mediterrenean district ranging from the Cape Verde Islands, Algeria, Spain, Italy to Sicily, and *T. dolgovi* (KOROTYAEV, 1977) from Mongolia. Thus, the occurrence of this genus in Japan is unexpected because of their known range of distribution.

As this genus was not included in my key to the Oriental genera (MORIMOTO, 1972), a revised key is provided for the genera of the tribe Anthribini in Asia as in the followings:

1(2) Tarsi robust; second segment transverse, deeply concave in U-shape and almost completely receives the third between latero-apical processes; third segment shallowly notched at apical margin, with longitudinal groove for receiving the fifth on dorsum. Predaceous on lecaniine scale insects .... *Anthribus* FORSTER

2(1) Tarsi slender; second segment often longer than broad, shallowly concave at apical margin; third segment much exceeding beyond the latero-apical process of the second, deeply bilobed almost to the base. Phytophagous.

3(4) Eyes large, more or less convergent on frons, interocular distance two-thirds the width of rostrum; lateral carina of rostrum prolonged posteriorly into the middle of eye .... *Paramesus* FAHRAEUS

4(3) Eyes smaller, lateral, forehead hardly narrower than the base of rostrum; lateral carina of rostrum reaching the anterior margin of eye .... *Trigonorhinus* WOLLASTON

Prof. H. SASAJI of Fukui University found out this interesting weevil in the collection of Coleoptera made by Mr. H. SAKAMOTO and sent it to me for identification, to these entomologists I wish to express my cordial thanks.

Trigonorhinus japonicus sp. nov.

Oblong subcylindrical; black except for the following parts: mouth appendages yellowish brown, antennae from first to 8th segments yellowish brown, clubs black, anterior margin of pronotum brownish, legs yellowish brown, femora partly infuscate, elytra underlying dark pubescent area dark brown and grey pubescent area light brownish; thickly clothed with dark brownish and greyish pubescence, of which the latter a little robuster and hairy.

Head usually concealed by pronotum in dorsal view, with dense and shallow punctures, weakly convex on vertex, shallowly depressed in the median broad area between antennal sockets; rostrum rapidly narrowed for a short distance from base, then weakly narrowed to apex, dorsal carina of antennal scrobe reaching eye; underside of head divided antero-posteriorly by an arcuate stria, posterior part almost bare, shiny, punctate, anterior part with dense greyish pubescence; mandibles with dorsal and ventral cutting edges, with sharp apical tooth; eyes ovate, with shallow emargination on anterior face; antennae with first and second segments robust, large, of the same length, but first much thicker, third to sixth segments of the same width, third segment a little shorter or almost as long as fourth, fifth to seventh of the same size, eighth segment a little broader than seventh, club with first segment as long as broad, second segment a little shorter than first, 1.4 times as broad as long, third segment twice as long as and as broad as second.

Pronotum 0.9-1.1 times as long as broad, broadest at base, narrowing anteriorly in a weak curve, arcuate at anterior margin, dorsal carina basal, weakly arcuate to scutellum, obtusely angulate to lateral carina, which extending forwards 1/3 to 1/4 length of side from the base, anterior part often concealed by pubescence; disc coriaceous, punctate, with narrow median and broad lateral greyish stripes, admedian dark brownish stripes often divided transversely by a median greyish band; lateral and ventral sides with greyish pubescence. Scutellum small, ovate, punctate, with a few greyish short pubescence.

Elytra about 1.5 times as long as broad, almost parallel-sided on basal 2/3, a little broader than pronotum, densely covered with greyish pubescence mixed with following dark brown patches; a pair of quadrate basal patches between scutellar striole and inner margin of fifth interval, a unified median subtriangular patch between fourth intervals, small humeral patch, and a few small patches on declivity and on fifth and seventh intervals, lateral margins more or less infuscate, which produced triangularly inwards as far as seventh interval behind the middle; striae narrow, shallow, partly concealed by greyish pubescence; intervals flat, coriaceous, punctate.

Femora with bare shallow sulcus on distal half for receiving tibia, more or less brownish on median swollen area; tibiae immaculate, weakly dilating apically; tarsi a little shorter than tibia, first segment weakly and second segment strongly widened apically; claws each bifid at apex, inner tooth about half as long as outer tooth.

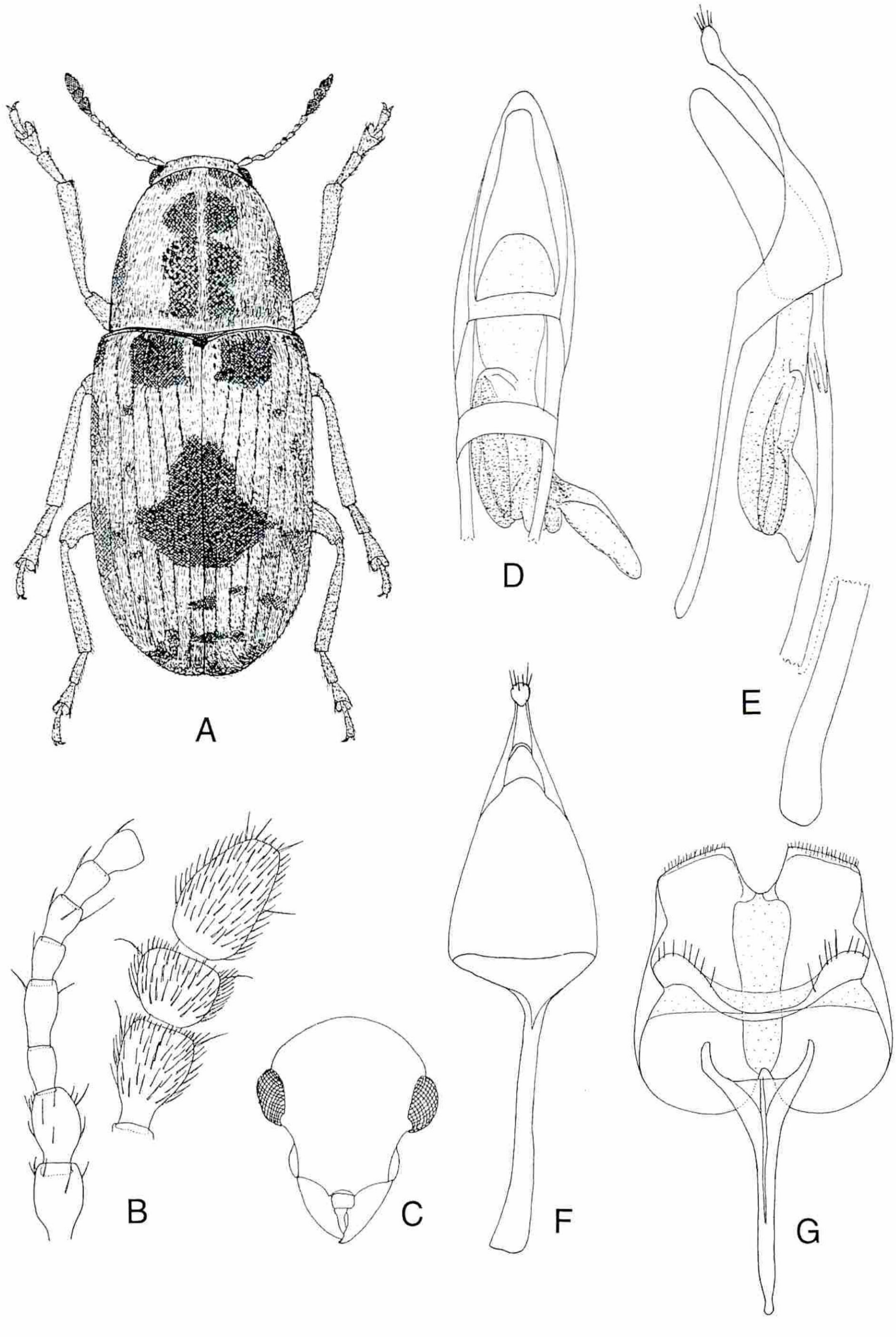
Undersurface more densely covered with greyish hair-like pubescence, more or less brownish along side margins of venter; fore coxae narrowly distant, mesosternal process as broad as the base of middle femur.

Male terminalia with eighth tergite longitudinally membranous in the middle, obliquely truncate and setose at apex of each lobe; eighth sternite narrow, with several long setae on apical margin excepting the middle; spiculum gastrale Y-shaped, symmetrical. Tegmen srongly tapered apicad, small globular and setose at apex. Aedeagus with pedon tapered apically and rounded at apex; tectum almost parallel-sided on apical third, broadly rounded at apex.

Length to apex of pronotum: 2.2-2.9 mm.

Holotype: ♂(Type No. 3091, Kyushu Univ.): Fukui University campus, Fukui City, 26. VIII. 1998, H. SAKAMOTO leg. Paratypes: 1♂, same locality and collector, 3. IX. 1998; 1♀, same locality and collector, 24. VI. 1998.

This new species is closest to *T. sticticus* (BOHEMAN, 1833) from North America, but the median dark patch on the elytra is characteristic.



Trigonorhinus japonicus sp. nov. ♂. A: Holotype. B: Antenna, paratype. C: Head, paratype. D-F: Aedeagus. (D: dorsal; E: lateral; F: Tegmen, dorsal). G: Eighth tergite and eighth and ninth sternites, ventral.

要　　約

森本　桂：日本から *Trigonorhinus* 属ヒゲナガゾウムシ１新種の記載 — 佐々治寛之教授から同定依頼された福井大学構内で坂本浩英氏採集のヒゲナガゾウムシは，日本から初めて発見される *Trigonorhinus* 属の新種で，種小名 *japonicus* を与えて記載した．この種は，吻が先へ狭くなることと上翅の特徴的な黒紋で日本産の似た感じのヒゲナガゾウ類から容易に区別できる．*Trigonorhinus* は新世界に多くの種が分布し，旧北区からは地中海西部地域とモンゴルから各１種が知られるだけの属で，今回の新種は北米産の *T. sticticus* に近似する．

Literatures cited

KOROTYAEV, B. A. 1977 Mongolian Anthribiade (Coleoptera). *Nasekomye Mongolii*, 5: 372-375. (in Russian)

——— 1990 Material on the fauna of beetles of the superfamily Curculionoidea (Coleoptera) of Mongolia and adjacent countries. *Nasekomye Mongolii*, 11: 216-234. (in Russian)

MORIMOTO, K. 1972 A key to the genera of Oriental Anthribidae. *Bull. Gov. Forest exp. Sta.*, (246): 35-54, 17 pls.

SAKAMOTO, H. 1990 Several remarkable Coleoptera collected in the Fukui University campus, Fukui Prefecture, Japan. *Ent. J. Fukui*, (24): 41-42. (in Japanese)

VALENTINE, B. D. 1957 Anthribid weevils from Yukatan collected on the explorers club- American Museum of Natural History expedition, with notes on others of the *Brachytarsus* complex (Coleoptera, Anthribidae). *Amer. Mus. Novit.*, (1848): 1-11.

——— 1960 The genera of the weevil family Anthribidae north of Mexico. *Trans. Amer. ent. Soc.*, LXXXVI: 41-85.

——— 1971 Family Anthribidae. *In* Hatch, M. H. , *The beetles of the Pacific Northwest*, V: 243-248. Univ. Washington Press.

Ent. Rev. Japan, 54 (1):65-77, June 30, 1999

Records of Tiger Beetle collected by Mr. CAROLUS HOLZSCHUH in Laos (Coleoptera: Cicindelidae)

By HIROFUMI SAWADA
158-24, Harabetsu, Kamiunabara, Aomori, 030-0921 Japan

and

JÜRGEN WIESNER *
Dresdener Ring 11, D-38444 Wolfsburg, Germany

Abstract *Neocollyris* (*Brachycollyris*) *purpureomaculata* borea and *N. ramai* are reported as new records to Laos, and new distributional records of 36 species in province level are given with some corrections of previous records.

Mr. CAROLUS HOLZSCHUH, Vienna, Austria collected many coleopterous specimens including the cicindelid beetles in Laos. He offered us nearly all of them to examine, and we would like to list up the species.

Tricondyla pulchripes pulchripes WHITE, 1844

Specimens examined: 2♂♂, 26-28. V. 1996, S Laos, Prov. Champasak, Bolavensplateau (E Pakse), Muang Paksong-Ban Nam Thang, 800-1000 m.

New record from Champasak province.

Tricondyla gestroi gestroi FLEUTIAUX, 1893

Specimens examined: 1♂3♀♀, 14-22. VI. 1996, N Laos, Prov. Luang Nam Tha, 10-30 km NW Luang Nam Tha, 800 m; 3♂♂2♀♀, 5-30. V. 1997, N Laos, 20 km NW Louang Namtha, 21°09.2'N/ 101°18.7'E, 900-1100 m.

Tricondyla mellyi CHAUDOIR, 1850

Specimens examined: 1♂, 9-15. VI. 1996, N Laos, Prov. Luang Nam Tha, Muang Sing Umgebung, 600-700 m; 1♂1♀, 26-28. V. 1996, S Laos, Prov. Champasak, Bolavensplateau (E Pakse), Muang

---

* 63. Contribution towards the knowledge of Cicindelidae

Paksong-Ban Nam Thang, 800-1000 m; 2♂♂4♀♀, 5-30. V. 1997, N Laos, 20 km NW Louang Namtha, 21°09.2'N/ 101°18.7'E, 900-1100 m.

Tricondyla cyanea annulicornis SCHMIDT-GOEBEL, 1846

Specimens examined: 1♂, 28. V. 1996, S Laos, Prov. Champasak, ca. 40 km NE Pakse, 300-400 m.

Protocollyris probsti NAVIAUX, 1994

Specimens examined: 1♂.1♀ 29-30. V. 1996, S Laos, Prov. Sekong, N-Abhang des Bolavens-Plateaus, ca. 10 km N Muang Tha Teng, 500-700 m; 1♀, 5-30. V. 1997, N Laos, 20 km NW Louang Namtha, 21°09.2'N/ 101°18.7'E, 900 - 1100 m.

New record from Xédôn and Louangnamtha provinces.

Protocollyris grossepunctata (W. HORN, 1935)

Specimens examined: 1♀, 29-30. V. 1996, S Laos, Prov. Sekong, N-Abhang des Bolavens-Plateaus, ca. 10 km N. Muang Tha Teng, 500-700 m.

New record from Xédôn province.

Neocollyris (*Brachycollyris*) *purpureomaculata borea* NAVIAUX, 1994

Specimens examined: 1♂, 5-30. V. 1997, N Laos, 20 km NW Louang Namtha, 21°09.2'N/ 101°18.7'E, 900-1100 m.

New record from Laos. Up to now known from Thailand.

Neocollyris (*Neocollyris*) *bonellii* (GUERIN-MENEVILLE, 1834)

Specimens examined: 1♂, 23-25. V. 1996, S Laos, Prov. Champasak, 10 - 50 km S Pakse, 50-100 m; 1♂,14-22. VI. 1996, N Laos, Prov. Luang Nam Tha, 10-30 km NW Luang Nam Tha, 800 m; 1♂, 27. IV-1. V. 1997, C Laos, 70 km NE Vientiane, Ban Phabat, 18°16.1'N/ 103°10.9'E, 150 m; 2♀♀, 5-30. V. 1997, N Laos, 20 km NW Louang Namtha, 21°09.2'N/ 101°18.7'E, 900 - 1100 m.

New record from Champasak province.

Neocollyris (*Neocollyris*) *moesta moesta* (SCHMIDT-GOEBEL, 1846)

Specimens examined: 1♀, 23-25. V. 1996, S Laos, Prov. Champasak, 10-50 km S Pakse, 50-100 m; 1♀, 9-15. VI. 1996, N Laos, Prov. Luang Nam Tha, Muang Sing Umgebung, 600-700 m; 1♂1♀, 14-22. VI. 1996, N Laos, Prov. Luang Nam Tha, 10-30 km NW Luang Nam Tha, 800 m.

New record from Champasak province.

Neocollyris (*Neocollyris*) *cruentata* (SCHMIDT-GOEBEL, 1846)

Specimens examined: 2♂♂, 14-22. VI. 1996, N Laos, Prov. Luang Nam Tha, 10-30 km NW Luang Nam Tha, 800 m.

Neocollyris (*Neocollyris*) *intermedia* NAVIAUX, 1994

Specimens examined: 1♀, 29-30. V. 1996, S Laos, Prov. Sekong, N-Abhang des Bolavens-Plateaus, ca. 10 km N Muang Tha Teng, 500-700 m; 2♂♂, 1♀14-22. VI. 1996, N Laos, Prov. Luang Nam Tha, 10-30 km NW Luang Nam Tha, 800 m; 1♀, 17. VI. 1996, N Laos, Prov. Luang Nam Tha, 10-20 km NE Luang Nam Tha, Strase nach Boten, 600 m; 2♂♂1♀, 5-30. V. 1997, N Laos, 20 km NW Louang Namtha, 21°09.2'N/ 101°18.7'E, 900-1100 m.

New record from Xédôn province.

Neocollyris (*Neocollyris*) *fuscitarsis* (SCHMIDT-GOEBEL, 1846)

Specimens examined: 1♀, 9-15. VI. 1996, N Laos, Prov. Luang Nam Tha, Muang Sing Umgebung, 600-700 m; 2♀♀, 5-30. V. 1997, N Laos, 20 km NW Louang Namtha, 21°09.2'N/ 101°18.7'E, 900-1100 m.

New record from Louangnamtha province.

Neocollyris (*Neocollyris*) *rufipalpis* (CHAUDOIR, 1864)

Specimens examined: 2♀♀, 14-22. VI. 1996, N Laos, Prov. Luang Nam Tha, 10-30 km NW Luang Nam Tha, 800 m; 3♂♂7♀♀, 5-30. V. 1997, N Laos, 20 km NW Louang Namtha, 21°09.2'N/ 101°18.7'E, 900-1100 m.

Neocollyris (*Leptocollyris*) *linearis linearis* (SCHMIDT-GOEBEL, 1846)

Specimens examined: 1♀, 23-25. V. 1996, S Laos, Prov. Champasak, 10-50 km S Pakse, 50-100 m; 1♂1♀, 14-22. VI. 1996, N Laos, Prov. Luang Nam Tha, 10-30 km NW Luang Nam Tha, 800 m; 3♂♂5♀♀, 5-30. V. 1997, N Laos, 20 km NW Louang Namtha, 21°09.2'N/ 101°18.7'E, 900-1100 m.

Neocollyris (*Leptocollyris*) *variicornis* (CHAUDOIR, 1864)

Specimens examined: 1♂1♀, 26-28. V. 1996, S Laos, Prov. Champasak, Bolavensplateau (E Pakse), Muang Paksong-Ban Nam Thang, 800-1000 m; 2♀♀, 9-15. VI. 1996, N Laos, Prov. Luang Nam

Tha, Muang Sing Umgebung, 600-700 m; 1♂1♀, 29-30. V. 1996, S Laos, Prov. Sekong, N-Abhang des Bolavens-Plateaus, ca. 10 km N Muang Tha Teng, 500-700 m; 1♀, 14-22. VI. 1996, N Laos, Prov. Luang Nam Tha, 10-30 km NW Luang Nam Tha, 800 m; 1♀, 27. IV-1. V. 1997, C Laos, 70 km NE Vientiane, Ban Phabat, 18°16.1'N/ 103°10.9'E, 150 m; 2♂♂, 1♀ 5-30. V. 1997, N Laos, 20 km NW Louang Namtha, 21°09.2'N/ 101°18.7'E, 900-1100 m.

New record from Louangnamtha, Champasak and Xédông provinces.

Neocollyris (*Leptocollyris*) *variitarsis variitarsis* (CHAUDOIR, 1860)

Specimens examined: 2♂♂, 27. IV-1. V. 1997, C Laos, 70 km NE Vientiane, Ban Phabat, 18°16.1'N/ 103°10.9'E, 150 m; 1♀, 23-25. V. 1996, S Laos, Prov. Champasak, 10-50 km S Pakse, 50-100 m; 1♀, 1-8. VI. 1996, C Laos, Prov. Chiangchan, 90 km E Vientiane, Phou Khao Khouay Nationalpark, Nam Leuk, Umg. Tad Leuk, 200 m; 4♂♂2♀♀, 5-30. V. 1997, N Laos, 20 km NW Louang Namtha, 21°09.2'N/ 101°18.7'E, 900-1100 m.

New record from Vientiane, Champasak and Xiangkhoang provinces.

Neocollyris (*Stenocollyris*) *compressicollis* (W. HORN, 1909)

Specimens examined: 1♂1♀, 5-30. V. 1997, N Laos, 20 km NW Louang Namtha, 21°09.2'N/ 101°18.7'E, 900-1100 m.

Prothyma (*Paraprothyma*) *schmidtgoebeli schmidtgoebeli* (W. HORN, 1895)

Specimens examined: 1♀, 9-15. VI. 1996, N Laos, Prov. Luang Nam Tha, Muang Sing Umgebung, 600-700 m; 1♂, 27. IV-1. V. 1997, C Laos, 70 km NE Vientiane, Ban Phabat, 18°16.1'N/ 103°10.9'E, 150 m.

Prothyma (*Genoprothyma*) *fallaciosa fallaciosa* RIVALIER, 1964

Specimens examined: 1♂2♀♀, 5-30. V. 1997, N Laos, 20 km NW Louang Namtha, 21°09.2'N/ 101°18.7'E, 900-1100 m.

Heptodonta ferrarii ferrarii GESTRO, 1893

Specimens examined: 3♀♀, 5-30. V. 1997, N Laos, 20 km NW Louang Namtha, 21°09.2'N/ 101°18.7'E, 900-1100 m.

Heptodonta eugenia CHAUDOIR, 1865

Specimens examined: 3♂♂1♀, 1-8. VI. 1996, C Laos, Prov. Chiangchan, 90 km E Vientiane, Phou Khao Khouay Nationalpark, Nam Leuk, Umg. Tad Leuk, 200 m.

Therates pseudoconfluens SAWADA & WIESNER, 1999

Specimens examined: 1♂, 5-30. V. 1997, N Laos, 20 km NW Louang Namtha, 21°09.2'N/ 101°18.7'E, 900-1100 m.

Therates differens SAWADA & WIESNER, 1999

Specimens examined: 4♀♀, 5-30. V. 1997, N Laos, 20 km NW Louang Namtha, 21°09.2'N/ 101°18.7'E, 900-1100 m.

Therates probsti WIESNER, 1988

Specimens examined: 1♂, 5-30. V. 1997, N Laos, 20 km NW Louang Namtha, 21°09.2'N/ 101°18.7'E, 900-1100 m.

Therates fruhstorferi vitalisi W. HORN, 1913

Specimens examined: 1♂1♀, 5-30. V. 1997, N Laos, 20 km NW Louang Namtha, 21°09.2'N/ 101°18.7'E, 900-1100 m.

Calochroa flavomaculata flavomaculata (HOPE, 1831)

Specimens examined: 1♀, 1-8. VI. 1996, C Laos, Prov. Chiangchan, 90 km E Vientiane, Phou Khao Khouay Nationalpark, Nam Leuk, Umg. Tad Leuk, 200 m; 1♀, 9-15. VI. 1996, N Laos, Prov. Luang Nam Tha, Muang Sing Umgebung, 600-700 m.

New record for Xiangkhoang province.

Calochroa mouhotii elegantula (DOKHTOUROFF, 1882)

Specimens examined: 3♂♂, 9-15. VI. 1996, N Laos, Prov. Luang Nam Tha, Muang Sing Umgebung, 600-700 m; 6♂♂4♀♀, 5-30. V. 1997, N Laos, 20 km NW Louang Namtha, 21°09.2'N/ 101°18.7'E, 900-1100 m.

Calochroa mouhotii pseudosiamensis (W. HORN, 1913)

Specimens examined: 1♂2♀♀, 27. IV-1. V. 1997, C Laos, 70 km NE Vientiane, Ban Phabat, 18°16.1'N/ 103°10.9'E, 150 m.

Calochroa interruptofasciata flavolineata (CHAUDOIR, 1865)

Specimens examined: 2♂♂1♀, 23-25. V. 1996, S Laos, Prov. Champasak, 10-50 km S Pakse, 50-100 m; 3♂♂2♀♀, 1-8. VI. 1996, C Laos, Prov. Chiangchan, 90 km E Vientiane, Phou Khao Khouay Nationalpark, Nam Leuk, Umg. Tad Leuk, 200 m; 1♀, 9-15. VI. 1996, N Laos, Prov. Luang Nam Tha, Muang Sing Umgebung, 600-700 m.

New record from Champasak and Xiangkhoang provinces.

Calochroa bramani (DOKHTOUROFF, 1882)

Specimens examined: 2♀♀, 23-25. V. 1996, S Laos, Prov. Champasak, 10-50 km S Pakse, 50-100 m.

New record from Champasak province and first record after publication of Horn 1926.

Lophyridia angulata angulata (FABRICIUS, 1798)

Specimens examined: 2♂♂1♀, 28. V. 1996, S Laos, Prov. Champasak, ca. 40 km NE Pakse, 300-400 m; 5♂♂5♀♀, 1-8. VI. 1996, C Laos, Prov. Chiangchan, 90 km E Vientiane, Phou Khao Khouay Nationalpark, Nam Leuk, Umg. Tad Leuk, 200 m; 1♂, 29-30. V. 1996, S Laos, Prov. Sekong, N-Abhang des Bolavens-Plateaus, ca. 10 km N Muang Tha Teng, 500-700 m.

New record from Champasak, Xedong and Xiangkhoang provinces.

Lophyridia plumigera scoliographa RIVARIER, 1953

Specimens examined: 1♂5♀♀ 1-8. VI. 1996, C Laos, Prov. Chiangchan, 90 km E Vientiane, Phou Khao Khouay Nationalpark, Nam Leuk, Umg. Tad Leuk, 200 m.

New record from Xiangkhoang province. Sawada & Wiesner recently (1999) misspelled *L. scoliographa as L. macrograptina* ACCIAVATTI & PEARSON, 1989. *L. macrograptina* is known from Pakistan, India, Nepal and Bangladesh and *L. scoliographa* from Malacca, Burma, Thailand, Kambodscha, Laos, Vietnam and Hainan.

Lophyridia funerea funerea (MACLEAY, 1825)

Specimens examined: 1♂5♀♀ 9-15. VI. 1996, N Laos, Prov. Luang Nam Tha, Muang Sing Umgebung, 600 -700 m.

Cosmodela duponti duponti (DEJEAN, 1826)

Specimens examined: 1♀, 23-25. V. 1996, S Laos, Prov. Champasak, 10-50 km S Pakse, 50-100 m; 1♂1♀, 28. V. 1996, S Laos, Prov. Champasak, ca. 40 km NE Pakse, 300-400 m.

Cosmodela aurulenta juxtata (ACCIAVATTI & PEARSON, 1989)

Specimens examined: 1♀, 27. IV-1. V. 1997, C Laos, 70 km NE Vientiane, Ban Phabat, 18°16.1N/ 103°10.9E, 150 m; 3♀♀, 9-15. VI. 1996, N Laos, Prov. Luang Nam Tha, Muang Sing Umgebung, 600-700 m.

Lophyra (Lophyra) fuliginosa (DEJEAN, 1826)

Specimens examined: 2♂♂1♀, 9-15. VI. 1996, N Laos, Prov. Luang Nam Tha, Muang Sing Umgebung, 600-700 m; 1♂1♀, 27. IV-1. V. 1997, C Laos, 70 km NE Vientiane, Ban Phabat, 18°16.1'N/ 103°10.9'E, 150 m.

New record from Vientiane province.

Lophyra (Spilodia) striolata striolata (ILLIGER, 1800)

Specimens examined: 5♂♂4♀♀, 27. IV-1. V. 1997, C Laos, 70 km NE Vientiane, Ban Phabat, 18°16.1N/ 103°10.9E, 150 m; 1♂1♀, 5-30. V. 1997, N Laos, 20 km NW Louang Namtha, 21°09.2'N/ 101°18.7'E, 900-1100 m.

Lophyra (Spilodia) lineifrons (CHAUDOIR, 1865)

Specimens examined: 1♂, 23-25. V. 1996, S Laos, Prov. Champasak, 10-50 km S Pakse, 50-100 m; 2♂♂, 9-15. VI. 1996, N Laos, Prov. Luang Nam Tha, Muang Sing Umgebung, 600-700 m; 1♂, 1-8. VI. 1996, C Laos, Prov. Chiangchan, 90 km E Vientiane, Phou Khao Khouay Nationalpark, Nam Leuk, Umg. Tad Leuk, 200 m; 3♂♂, 27. IV-1. V. 1997, C Laos, 70 km NE Vientiane, Ban Phabat, 18°16.1'N/ 103°10.9'E, 150 m; 2♂♂2♀♀, 5-30. V. 1997, N Laos, 20 km NW Louang Namtha, 21°09.2'N/ 101°18.7'E, 900-1100 m.

New record from Champasak and Xiangkhoang provinces.

Naviauxella ramai NAVIAUX, 1991

Specimens examined: 1♂, 23-25. V. 1996, S Laos, Prov. Champasak, 10-50 km S Pakse, 50-100 m.

New record from Laos. Untill now known only from Thailand.

Cylindera (*Cylindera*) *delavayi* (FAIRMAIRE, 1886)

Specimens examined: 3♂♂5♀♀, 5-30. V. 1997, N Laos, 20 km NW Louang Namtha, 21°09.2'N/ 101°18.7'E, 900-1100 m.

Cylindera (*Ifasina*) *foveolata* (SCHAUM, 1863)

Specimens examined: 1♂, 23-25. V. 1996, S Laos, Prov. Champasak, 10 - 50 km S Pakse, 50-100 m; 1♂1♀, 9-15. VI. 1996, N Laos, Prov. Luang Nam Tha, Muang Sing Umgebung, 600-700 m; 8♂♂2♀♀, 27. IV-1. V. 1997, C Laos, 70 km NE Vientiane, Ban Phabat, 18°16.1'N/ 103°10.9'E, 150 m.

New record from Champasak province.

Cylindera (*Ifasina*) *cyclobregma* ACCIVATTI & PEARSON, 1989

Specimens examined: 1♂, 27. IV-1. V. 1997, C Laos, 70 km NE Vientiane, Ban Phabat, 18°16.1'N/ 103°10.9'E, 150 m; 3♂♂3♀♀, 5-30. V. 1997, N Laos, 20 km NW Louang Namtha, 21°09.2'N/ 101°18.7'E, 900-1100 m.

New record from Vientiane province.

Cylindera (*Ifasina*) *viduata* (FABRICIUS, 1801)

Specimens examined: 1♂, 29-30. V. 1996, S Laos, Prov. Sekong, N-Abhang des Bolavens-Plateaus, ca. 10 km N Muang Tha Teng, 500-700 m; 1♂, 1-8. VI. 1996, C Laos, Prov. Chiangchan, 90 km E Vientiane, Phou Khao Khouay Nationalpark, Nam Leuk, Umg. Tad Leuk, 200 m; 2♂♂5♀♀, 27. IV-1. V. 1997, C Laos, 70 km NE Vientiane, Ban Phabat, 18°16.1'N/ 103°10.9'E, 150 m.

New record from Xedong and Xiangkhoang provinces.

Cylindera (*Ifasina*) *fallaciosa* (W. HORN, 1897)

Specimens examined: 1♀, 23-25. V. 1996, S Laos, Prov. Champasak, 10-50 km S Pakse, 50-100 m; 3♀♀, 27. IV-1. V. 1997, C Laos, 70 km NE Vientiane, Ban Phabat, 18°16.1'N/ 103°10.9'E, 150 m; 1♂, 5-30. V. 1997, N Laos, 20 km NW Louang Namtha, 21°09.2'N/ 101°18.7'E, 900-1100 m.

New record from Champasak province.

Cylindera (*Ifasina*) *spinolae spinolae* (GESTRO, 1889)

Specimens examined: 1♂, 23.-25. V. 1996, S Laos, Prov. Champasak, 10-50 km S Pakse, 50-100 m; 3♂♂, 1-8. VI. 1996, C Laos, Prov. Chiangchan, 90 km E Vientiane, Phou Khao Khouay Nationalpark, Nam Leuk, Umg. Tad Leuk, 200 m; 5♂♂5♀♀, 5-30. V. 1997, N Laos, 20 km NW Louang Namtha, 21°09.2'N/ 101°18.7'E, 900-1100 m.

New record from Champasak and Xiangkhoang provinces.

Cylindera (Ifasina) paucipilina ACCIVATTI & PEARSON, 1989

Specimens examined: 1♂, 5-30. V. 1997, N Laos, 20 km NW Louang Namtha, 21°09.2'N/ 101°18.7'E, 900-1100 m.

Cicindina minuta (OLIVIER, 1790)

Specimens examined: 1♂, 1-8. VI. 1996, C Laos, Prov. Chiangchan, 90 km E Vientiane, Phou Khao Khouay Nationalpark, Nam Leuk, Umg. Tad Leuk, 200 m.

New record from Xiangkhoang province.

Myriochile (Myriochile) sinica (FLEUTIAUX, 1889)

Specimens examined: 1♀, 23-25. V. 1996, S Laos, Prov. Champasak, 10-50 km S Pakse, 50-100 m; 2♀♀, 9-15. VI. 1996, N Laos, Prov. Luang Nam Tha, Muang Sing Umgebung, 600-700 m.

New record from Champasak province.

Callytron andersoni (GESTRO, 1889)

Specimens examined: 1♂, 1-8. VI. 1996, C Laos, Prov. Chiangchan, 90 km E Vientiane, Phou Khao Khouay Nationalpark, Nam Leuk, Umg. Tad Leuk, 200 m; 1♀, 9-15. VI. 1996, N Laos, Prov. Luang Nam Tha, Muang Sing Umgebung, 600-700 m.

New record from Xiangkhoang province.

Check-List of the Tiger Beetles of Laos

All known species from Laos are listed up with detailed data of province (reference literature number bold and in brackets, bold N referring to material, reported in the present paper). Some new and unrecorded additional *Neocollyris* species will be reported by R. NAVIAUX in a separate publications. SAWADA & WIESNER (1999: 41) reported errouneously *Prothyma (Genoprothyma) rapillyi*, *Calochroa anometallescens*, *Calochroa octogramma* and *Abroscelis tenuipes* from Laos, but at present, there are no exact specimens of these species from Laos. Therefore their records are withdrawn from the list.

1. *Tricondyla pulchripes pulchripes* WHITE, 1844, Borikhan (10), Champasak (**N**)
2. *Tricondyla macrodera stricticeps* CHAUDOIR, 1860, Louangnamtha (8)
3. *Tricondyla gestroi gestroi* FLEUTIAUX, 1893, Louangnamtha (8, **N**), Vientiane (3)
4. *Tricondyla mellyi* CCHAUDOIR, 1850, Borikhan (10), Champasak (12, **N**), Louangnamtha (8, **N**), Vientiane (3)

5. *Tricondyla cyanea annulicornis* SCHMIDT-GOEBEL, 1846, Champasak (3, **N**), Khammouan (10), Louang-namtha (8), Vientiane (3)
6. *Tricondyla cyanipes nigripennis* MANDEL, 1977, Xiangkhoang (4)
7. *Protocollyris probsti* NAVIAUX, 1994, Louangnamtha (**N**), Louangphrabang (6), Xedon (**N**)
8. *Protocollyris grossepunctata* (W. HORN, 1935), Borikhan (10), Louangnamtha (8), Xedon (**N**)
9. *Neocollyris (Brachycollyris) purpureomaculata borea* NAVIAUX, 1994, Louangnamtha (**N**)
10. *Neocollyris (Isocollyris) fruhstorferi* (W. HORN, 1902), Borikhan (10)
11. *Neocollyris (Neocollyris) bonellii* (GUERIN-MENEVILLE, 1834), Borikhan (10), Champasak (**N**), Khammouan (10), Louangnamtha (8, N), Vientiane (3, 8, **N**)
12. *Neocollyris (Neocollyris) moesta moesta* (SCHMIDT-GOEBEL, 1846), Borikhan (10, 12), Champasak (**N**), Khammouan (10), Louangnamtha (8, **N**), Vientiane (3, 8)
13. *Neocollyris (Neocollyris) moesta fusca* NAVIAUX, 1994, Louangnamtha (8)
14. *Neocollyris (Neocollyris) cruentata* (SCHMIDT-GOEBEL, 1846), Borikhan (10), Louangnamtha (8, **N**), Vientiane (8)
15. *Neocollyris (Neocollyris) orichalcina orichalcina* (W. HORN, 1896), Champasak (12)
16. *Neocollyris (Neocollyris) intermedia* NAVIAUX, 1994, Borikhan (10), Louangnamtha (8, **N**), Vientiane (8), Xedon (N)
17. *Neocollyris (Neocollyris) fuscitarsis* (SCHMIDT-GOEBEL, 1846), Borikhan (10), Champasak (3), Khammouan (10), Louangnamtha (**N**), Vientiane (3)
18. *Neocollyris (Neocollyris) saphyrina* (CHAUDOIR, 1850), Vientiane (3)
19. *Neocollyris (Neocollyris) dimidiata* (CHAUDOIR, 1864), (2, no actual records are known from Laos)
20. *Neocollyris (Neocollyris) similis* (LESNE, 1891), Louangphrabang (6)
21. *Neocollyris (Neocollyris) rufipalpis* (CHAUDOIR, 1864), Borikhan (10), Louangnamtha (8, **N**)
22. *Neocollyris (Orthocollyris) crassicornis* (DEJEAN, 1825), Louangnamtha (8), Vientiane (3)
23. *Neocollyris (Leptocollyris) linearis linearis* (SCHMIDT-GOEBEL, 1846), Borikhan (10), Champasak (12, **N**), Louangnamtha (8, **N**)
24. *Neocollyris (Leptocollyris) discretegrossesculpta* (W. HORN, 1942), Louangnamtha (8)
25. *Neocollyris (Leptocollyris) variicornis* (CHAUDOIR, 1864), Borikhan (10), Champasak (**N**), Louangnamtha (8, **N**), Vientiane (**N**), Xedon (**N**)
26. *Neocollyris (Leptocollyris) subtilis subtilis* (CHAUDOIR, 1863), Vientiane (8)
27. *Neocollyris (Leptocollyris) variitarsis variitarsis* (CHAUDOIR, 1860), Champasak (**N**), Louangnamtha (8, **N**), Vientiane (**N**), Xiangkhoang (**N**)
28. *Neocollyris (Stenocollyris) compressicollis* (W. HORN, 1909), Borikhan (10), Louangnamtha (8, **N**)
29. *Neocollyris (Stenocollyris) signata* (W. HORN, 1902), Borikhan (10), Louangnamtha (8)
30. *Neocollyris (Stenocollyris) pseudosignata* (W. HORN, 1902), Borikhan (10)
31. *Neocollyris (Pachycollyris) strangulata* NAVIAUX, 1991, Borikhan (10)
32. *Neocollyris (Pachycollyris) bipartita unicolor* (W. HORN, 1935), (6, no actual records are known from Laos)
33. *Neocollyris (Pachycollyris) feai vitalisi* (W. HORN, 1924), Champasak (12), Louangnamtha (8)
34. *Neocollyris (Pachycollyris) tricolor* NAVIAUX, 1991, Louangnamtha (8)
35. *Neocollyris (Pachycollyris) semiaenescens* (W. HORN, 1935), (6, no actual records are known from Laos)
36. *Neocollyris (Pachycollyris) mouhotii mouhotii* (CHAUDOIR, 1864), Champasak (12), Khammouan (10)
37. *Collyris mniszechii* CHAUDOIR, 1864, Vientiane (3)
38. *Collyris gigas* LESNE, 1901, Louangphrabang (6)
39. *Collyris dormeri* (W. HORN, 1898), Borikhan (10)
40. *Prothyma (Paraprothyma) exornata* SCHMIDT-GOEBEL, 1846, (2, no actual records are known from Laos)
41. *Prothyma (Paraprothyma) schmidtgoebeli schmidtgoebeli* (W. HORN, 1895), Louangnamtha (8, **N**),

Vientiane (8, **N**)

42. *Prothyma (Genoprothyma) heteromalla* (MACLEAY, 1825), (2, no actual records are known from Laos)
43. *Prothyma (Genoprothyma) bouvieri bouvieri* W. HORN, 1896, Borikhan (10)
44. *Prothyma (Genoprothyma) fallaciosa fallaciosa* RIVALIER, 1964, Khammouan (10), Louangnamtha (8, **N**), Vientiane (8)
45. *Prothyma (Genoprothyma) vientianensis* SAWADA & WIESNER, 1996) Vientiane (7)
46. *Prothyma triumphaloides* SAWADA & WIESNER, 1999, Borikhan (10)
47. *Heptodonta pulchella* (HOPE, 1831), Khammouan (10)
48. *Heptodonta ferrarii ferrarii* GESTRO, 1893, Borikhan (10), Khammouan (10), Louangnamtha (8, **N**)
49. *Heptodonta freudei* MANDL, 1969, Vientiane (3)
50. *Heptodonta eugenia* CHAUDOIR, 1865, Borikhan (10), Houayxay (1), Louangnamtha (8), Vientiane (1, 8), Xiangkhoang (1, **N**)
51. *Pronyssa ingridae* SAWADA & WIESNER, 1999, Borikhan (9)
52. *Therates cribratus* FLEUTIAUX, 1893, (11, no actual records are known from Laos)
53. *Therates ottomerkli* WIESNER, 1999, Champasak (12)
54. *Therates gestroi* W. HORN, 1900, (11, no actual records are known from Laos)
55. *Therates csorbai* WIESNER, 1999, Champasak (12)
56. *Therates namthacolus* SAWADA & WIESNER, 1999, Louangnamtha (8)
57. *Therates pseudorugifer* SAWADA & WIESNER, 1999, Louangnamtha (8)
58. *Therates pseudoconfluens* SAWADA & WIESNER, 1999, Louangnamtha (8, **N**)
59. *Therates differens* SAWADA & WIESNER, 1999, Louangnamtha (8, *N*)
60. *Therates laotiensis* SAWADA & WIESNER, 1999, Borikhan (10)
61. *Therates bannapecolus* SAWADA & WIESNER, 1999, Borikhan (10)
62. *Therates circumscriptus* MORAVEC & WIESNER, 1999, Louangnamtha (5)
63. *Therates bannokcolus* SAWADA & WIESNER, 1999, Borikhan (10)
64. *Therates apicenigrus* SAWADA & WIESNER, 1999, Borikhan (10)
65. *Therates moraveci* SAWADA & WIESNER, 1999, Borikhan (10)
66. *Therates apiceflavus* SAWADA & WIESNER, 1999, Borikhan (10)
67. *Therates probsti* WIESNER, 1988, Louangnamtha (8, **N**)
68. *Therates tuberosus* FLEUTIAUX, 1893, Louangnamtha (8)
69. *Therates fruhstorferi vitalisi* W. HORN, 1913, Borikhan (10), Louangnamtha (8, **N**)
70. *Calochroa flavomaculata flavomaculata* (HOPE, 1831), Borikhan (10), Khammouan (10), Louangnamtha (8, **N**), Vientiane (3), Xiangkhoang (**N**)
71. *Calochroa carissima* (FLEUTIAUX, 1919), Louangphrabang (1)
72. *Calochroa mouhotii mouhotii* (CHAUDOIR, 1865), (2, no actual records are known from Laos)
73. *Calochroa mouhotii elegantula* (DOKHTOUROFF, 1882), Louangnamtha (8, **N**)
74. *Calochroa mouhotii pseudosiamensis* (W. HORN, 1913), Khammouan (10), Louangnamtha (8), Vientiane (3, **N**)
75. *Calochroa interruptofasciata interruptofasciata* (SCHMIDT-GOEBEL, 1846), (2, no actual records are known from Laos)
76. *Calochroa interruptofasciata flavolineata* (CHAUDOIR, 1865), Champasak (**N**), Louangnamtha (8, **N**), Vientiane (8), Xiangkhoang (**N**)
77. *Calochroa bramani* (DOKHTOUROFF, 1882), Champasak (**N**)
78. *Calochroa moraveci* SAWADA & WIESNER, 1999, Khammouan (10)
79. *Calochroa salvazai* (FLEUTIAUX, 1919), Houayxay (1)
80. *Lophyridia angulata* (FABRICIUS 1798), Borikhan (10), Champasak (**N**), Khammouan (10), Vientiane (3, 12), Xedon (**N**), Xiangkhoang (**N**)
81. *Lophyridia plumigera scoliographa* RIVALIER, 1953, Vientiane (12), Xiangkhoang (**N**)
82. *Lophyridia chloris* (HOPE, 1831), Vientiane (12)

83. *Lophyridia funerea funerea* (MACLEAY, 1825), Borikhan (10), Champasak (12), Khammouan (10), Louangnamtha (8, **N**), Vientiane (3)
84. *Lophyridia funerea nigrocolorata* (MANDL, 1969), Borikhan (10), Khammouan (10), Vientiane (3)
85. *Cosmodela duponti duponti* (DEJEAN, 1826), Borikhan (10), Champasak (12, **N**), Khammouan (10)
86. *Cosmodela aurulenta juxtata* (ACCIAVATTI & PEARSON, 1989), Borikhan (10, 12), Khammouan (10), Louangnamtha (8, **N**), Vientiane (3, 12, **N**)
87. *Cosmodela virgula* (FLEUTIAUX, 1893), Borikhan (10), Louangnamtha (8), Vientiane (3)
88. *Lophyra* (*Lophyra*) *fuliginosa* (DEJEAN, 1826), Borikhan (10), Khammouan (10), Louangnamtha (8, **N**), Vientiane (**N**)
89. *Lophyra* (*Lophyra*) *cancellata cancellata* (DEJEAN, 1825), Khammouan (10)
90. *Lophyra* (*Spilodia*) *striolata striolata* (ILLIGER, 1800), Borikhan (10), Khammouan (10), Louangnamtha (8, **N**), Vientiane (8, **N**)
91. *Lophyra* (*Spilodia*) *lineifrons* (CHAUDOIR, 1865), Borikhan (10, 12), Champasak (**N**), Khammouan (10), Louangnamtha (8, **N**), Vientiane (8, **N**), Xiangkhoang (**N**)
92. *Naviauxella ramai* NAVIAUX, 1991, Champasak (**N**)
93. *Naviauxella vientianensis* SAWADA & WIESNER, 1999, Vientiane (8)
94. *Cylindera* (*Cylindera*) *delavayi* (FAIRMEIRE, 1886), Louangnamtha (8, **N**)
95. *Cylindera* (*Ifasina*) *foveolata* (SCHAUM, 1863), Borikhan (10), Champasak (**N**), Khammouan (10), Louangnamtha (8, **N**), Vientiane (8, **N**)
96. *Cylindera* (*Ifasina*) *cyclobregma* ACCIAVATTI & PEARSON, 1989, Louangnamtha (8, **N**), Vientiane (**N**)
97. *Cylindera* (*Ifasina*) *viduata* (FABRICIUS, 1801), Borikhan (10, 12), Khammouan (10), Louangnamtha (8), Vientiane (8, **N**), Xedon (**N**), Xiangkhoang (**N**)
98. *Cylindera* (*Ifasina*) *fallaciosa* (W. HORN, 1897), Borikhan (10), Champasak (**N**), Khammouan (10), Louangnamtha (8, **N**), Vientiane (8, **N**)
99. *Cylindera* (*Ifasina*) *pronotalis* (W. HORN 1922), Vientiane (3)
100. *Cylindera* (*Ifasina*) *spinolae spinolae* (GESTRO, 1889), Borikhan (10, 12), Champasak (**N**), Khammouan (10), Louangnamtha (8, **N**), Vientiane (8), Xiangkhoang (**N**)
101. *Cylindera* (*Ifasina*) *paucipilina* ACCIAVATTI & PEARSON, 1989, Louangnamtha (8, **N**)
102. *Cylindera* (*Ifasina*) *decempunctata* (DEJEAN, 1825), (2, no actual records are known from Laos)
103. *Cylindera* (*Ifasina*) *kaleea kaleea* (BATES, 1866), Borikhan (10), Louangnamtha (8)
104. *Cicindina minuta* (OLIVIER, 1790), Borikhan (10), Champasak (12), Khammouan (10), Vientiane (3, 8, 12), Xiangkhoang (**N**)
105. *Cicindina mutata* (FLEUTIAUX, 1893), Borikhan (10)
106. *Cicindina biprolongata* (W. HORN, 1924), Vientiane (12)
107. *Myriochile* (*Myriochile*) *sinica* (FLEUTIAUX, 1889), Champasak (**N**), Louangnamtha (8, **N**)
108. *Callytron andersoni* (GESTRO, 1889), Borikhan (10), Khammouan (10), Louangnamtha (8, **N**), Xiangkhoang (**N**)

The number of the above-listed species of tiger beetle in each province of Laos (arranged from north to south) are as the following: Phôngsali = 0, Louang-namtha = 56, Houayxay = 2, Xay = 0, Louangphrabang = 4, Houaphan = 0, Xiangkhoang = 12, Xaignabouri = 0, Vientiane = 40, Borikhan = 47, Khammouan = 26, Savannakhet = 0, Saravan = 0, Xédôn = 6, Champasak = 26, Attapu = 0.

Acknowledgement

The authors are indebted to many friends and colleagues, especially to CAROLUS

HOLZSCHUH for his offer of the materials and to Prof. DAVID L. PEARSON for his reviewing most parts of the manuscript.

References

FLEUTIAUX, E 1919: Sur quelques Cicindelidae du Laos (Col.). *Bull. Soc. ent. Fr.*: 126-128. (1)

HORN, W. 1926: Carabidae, Cicindelinae. In: Junk, W., Schenkling, S., *Coleop. Cat.*, pars 86: 1-345. (2)

MANDL, K. 1969: Eine Cicindeliden-Ausbeute aus der orientalischen Region nebst Beschreibung von vier neuen Formen (Coleoptera). *Reichenbachia* 12, 15: 149-156. (3)

——— 1977: Drei neue Collyrini-Formen aus Sud-Indien (Coleoptera, Collyrini). *Zeits. Arb. Ost. Ent.*, 29, 3/4: 113-116. (4)

MORAVEC, J. & J. WIESNER. 1999: Ein neuer *Therates* (Cicindelidae, Coleoptera) von Laos, 58. Beitrag zur Kenntnis der Cicindelidae. *Ent. Zeits.* 109, 4: 173-174. (5)

NAVIAUX, R. 1995: Les *Collyris* (Coleoptera Cicindelidae), Revision des genres et description de de nouveaux taxons. - *Bull. Mens. Soc. Linn. Lyon*, Separatum: 1-332. (6)

SAWADA, H. & J. WIESNER. 1996: Eine neue *Prothyma*-Art aus Laos (Coleoptera: Cicindelidae), 42. Beitrag zur Kenntnis der Cicindelidae. *Ent. Zeits.* 106, 10: 431-432. (7)

——— 1999: Beitrag zur Kenntnis der Cicindelidae (Col.) von Laos (Coleoptera: Cicindelidae), 55. Beitrag zur Kenntnis der Cicindelidae. *Ent. Zeits.* 109, 1: 27-43. (8)

——— 1999: (in press): Die Arten der Gattung *Pronyssa* (Coleoptera: Cicindelidae), 59. Beitrag zur Kenntnis der Cicindelidae. *Ent. Zeits.* (9)

——— 1999: (in press): Weiterer Beitrag zur Kenntnis der Cicindelidae (Col.) von Laos (Coleoptera: Cicindelidae), 60. Beitrag zur Kenntnis der Cicindelidae. *Ent. Zeits.* (10)

WIESNER, J. 1988: Die Gattung *Therates* Latr. und ihre Arten, 15. Beitrag zur Kenntnis der Cicindelidae (Coleoptera). *Mitt. Münch. Ent. Ges.* 78: 5-107. (11)

——— 1999: (in press): Ergebnisse einer Sammelreise von O. Merkl und G. Csorba nach Laos (Cicindelidae, Coleoptera), 62. Beitrag zur Kenntnis der Cicindelidae. *Ent. Zeits.* (12)

原稿作成の要領

欧文原稿

1. 用紙にはＡ４判を用い，左右に3 cm 以上の余白をあけ，タイプライター，ワードプロセッサーあるいはコンピューターで打ち出したものとする．行間はダブルスペースとし，人名を除いて，表題や見出しを含めていかなる場合も大文字だけでは打たない．人名のみ大文字で打つ．

   タイプ原稿やフロッピーの作れない原稿の場合は，スキャナーで読み取るためイタリックやボールドなどの指定のない文字を使用し，下線や訂正の書き込みのない原稿（コピーでもよい）を一部付ける．
2. 報文原稿は，表題，著者名，所属機関とその所在地，または住所，刷り上がり 10 行程度までの（約150語）の英文の著者抄録 (Abstract)，本文，和文要約，文献の順に配列する．

   提出原稿の一部は無処置で，他の一部は動，植物の属およびそれ以下の学名に下線を引き，また人名には二重の下線を引く（第一字を除いて）．引用文献は著者名のアルファベット順に並べ，下記の形式で記す．

   BLACKWELDER, R. E., 1936. Morphology of the coleopterous family Staphylinidae. Smiths. misc. Coll., 94 (13): 1-102

   —1952. The generic names of the beetle family Staphylinidae with an essay on genotypy. Bull. U.S. natn. Mus., 200: i-iv+1-483.

   MüLER, J., 1925. Terzo contributo alla conoscenza del genere Staphylinus L. Boll. Soc.ent.ital., 50: 40-48.
3. 報文中の採集または検視データは以下のように表記する．

   （例）3♂♂, 2♀♀, Amaishi, Hyôgo, 28. V. 1995, Y. HAYASHI leg.
4. 原稿には原稿用紙と同質の表紙をつけ，これに表題，ランニング・タイトル（簡略化した論文表題，— 欧文 40 字内外），著者名，連絡先を明記し，赤字で原稿及び図表の枚数，別刷りの必要部数, その他連絡事項など記入．
5. 図は耐水性黒色インクで鮮明に描き，そのまま印刷出来るようにする．図の拡大（縮小）率を示したい場合は図中にスケールを入れる．原図には薄紙のカバーをかけ，これに著者名，図の番号，上の方向を示し，図の裏にその種名を入れる．もし原図版上に取り扱い指定文字を入れるときには，必ず青鉛筆を用いる．原図の大きさは，台紙を含めてＡ４判 (210 mm × 295 mm) 以内とされたい．また原図の返送が必要な場合は，カバーにその旨を記入する．
6. 図の説明及び表はそれぞれ別紙に書き，原稿末につける．

編集委員からのお願い

投稿される原稿については，投稿規定並びに原稿作製の要領をよく参照されて作成してください．本文の入ったフロッピーディスクはマッキントッシュまたはＭＳ－ＤＯＳのフォーマットされたものに，必ずテキストファイルで入力してください．ワードプロセッサー専用機は専用ＯＳのため，そのままでは取り込みは出来ません．ＤＯＳ変換したものをお送り下さい．

原稿をプリントアウトする際には特に段落がはっきり判るように作成してください．，また，段落内の文節や単語の間が開きすぎないようにしてください．スキャナーで取り込むときに文章がバラけて取り込まれ，文章が壊れることがあります．

引用文献については，編集でチェック出来ないものもあるので，本誌の書式をよく確かめてください．また文献名の省略形式も充分確認してください．

人名（欧文）は全て大文字で打ち込んで下さい．中国，韓国，タイなど，日本と同じ順序による姓名表記の場合も，欧米式の姓名表記とします（つまり名，姓の順）．

投稿原稿，別刷について

従来超過ページ負担無しを１０ページまでとしていましたが，当分の間１６ページまでとします．また別刷は全て表紙付きとして，表紙代のみ学会負担とし，他の経費は著者負担とします．現在最も高くついているのが製本代です．

和文要約について

評論への投稿原稿には和文要約を必ず付けて下さい．学術用語で打ち出せない漢字もありますが，できるだけ努力します．

会費納入のお願い

本学会の会費は前納制です．1999年度会費5,000円を早急にお納め下さい．自身の会費納入状況は封筒の宛名の下に記入してあります．宛名ラベル作製の時期の具合によって，納入されているにもかかわらず未納扱されている場合があるようですので，お気付きの方は会計（野村英世：〒590-0144　堺市赤坂台１-１８-５　Tel 0722-98-4066）までご連絡下さい．

会費納入は，振替口座をご利用下さい．　振替口座：００９９０－８－３９６７２

会誌の発行について

“昆虫学評論”および“ねじればね”の発行日は６月１５日と１２月１５日に設定していますが，投稿原稿の審査制の採用により原稿の事前処理に以前より時間がかかり，発行が遅れがちになっています．このため原稿は一応の締切を３月１５日（６月発行に対して），９月１５日（１２月発行に対して）とします．但し事前処理の進行によっては，掲載が早まることも，遅れることもありますのでご了承下さい．

“ねじればね”は今年度も少なくも３回は発行する予定です．“昆虫学評論”は慢性的に原稿が不足しています．今回も締切を延ばし延ばしでアドバイサーにも大変ご無理お願いしています．投稿された原稿は掲載することを原則としています．時にかなりの補正を求める場合もありますが，それは論文がより良い状態になることを望んでのことですのでご理解お願いいたします．ご投稿下さる方はなるべく早めにご投稿下さい．

会　　　告

学会の各事務担当委員は下記のとおりです．

総務，庶務（林）：会計（野村）：編集（昆蟲學評論：林，木村，初宿；ねじればね：水野，伊藤建）：本部，例会（初宿）：会員（野村，伊藤建）：渉外（伊藤昇）

故林匡夫会長の追悼号について

故林匡夫会長の追悼の号として５４巻２号を当てます．論文を寄せていただくと大変有り難いのでご協力をお願い致します．投稿規定は通常のものに準拠します．締め切りは1999年８月31日とします．細目については林靖彦までお問い合わせ下さい．学会としては氏の略歴および著作目録を編纂するべく，現在調査中です．また，氏の記載された新種のタイプリストも作成する予定でいます（何れも水野弘造担当）．

１９９９年度行事予定

例　会：１０月２４日（日）に大阪市立自然史博物館に於いて開催予定．
採集会：７月１０（土），１１日（日），和佐又山に於いて日本鞘翅学会と共催で行います
大　会：１２月１２日（日），大阪市立自然史博物館に於いて
特別例会：９月２５日（土），愛媛大学農学部に於いて

経費節減のため，案内は‘ねじればね’誌上でしたいと思いますので，取り敢えず今年のカレンダーに記入しておいて下さい．(お問い合わせは林または初宿まで)

An Urgent Notice

On 26th May 1999, Dr. TAKEHIKO NAKANE suddenly died. Firstly knowing the news of his death, we were not able to believe it, because he had been vigorously working just before such a sad matter. We are heartily regretful for his death.

He was a world-famous entomologist who dealt with almost all families of Coleoptera and extremely contributed to the development of entomology in Japan after the Second World War. His papers and books are very excellent and large in number. His death is great loss to the realm of entomology not only in Japan but also in the world.

He was a member of councilors of and the honorary membership of the Japan Coleopterological Society, for the establishment of which he had made every efforts with several entomologists.

It owes to his contribution that the society continues to develop up to the date. We are fully sure that his death should be responded with the further development of the society .

Lastly we would like to express our deepest regret for his death again.

The Japan Coleopterological Society

早く、簡単、便利、しかもきれい。

『エスカル』のりテープ／修正テープ

＜のりテープ＞

●貼りたい部分に当てて引くだけで手を汚さず簡単にムラなく貼れます。

●あらゆる紙に使え、直線、曲線も自由自在に貼れます。

●のり面にホコリが付かないキャップ付。

●テープ交換はカセット式。つめ換えが簡単です。

寸法：テープ巾8mm
（のり面5mm）×長さ10m
色　：ブルー
価格：600円
交換カセット　400円

のりテープと修正テープのカセットは互換性があります。

＜修正テープ＞

●消した上からすぐに書き込めます。

●修正面がフラットで書きやすい。

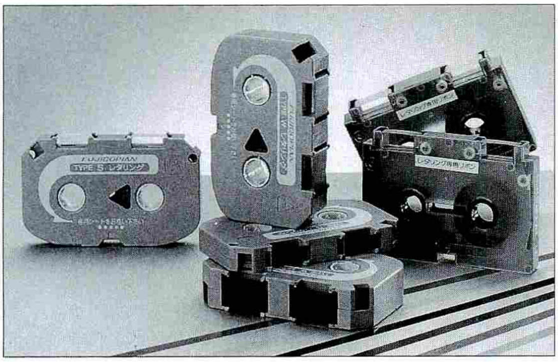
●ワープロ、コピー、ファックス、手書きの修正に最適。

●コピーやファックスをした場合、修正個所に影が出ません。

●テープ交換はカセット式。つめ換えが簡単です。

寸法：テープ巾5mm×長さ7m
色　：ピンク
価格：600円
交換カセット　300円

ワープロ用インスタント『レタリングリボン』



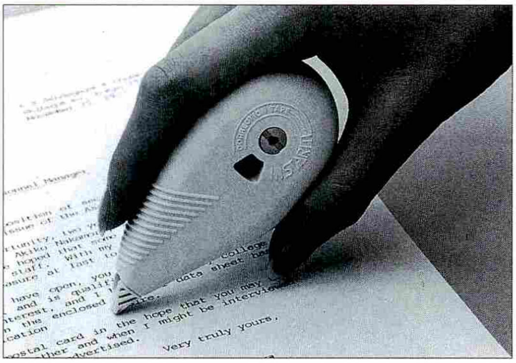
ワープロで打った文字やイラストで、
お好きなところにインスタントレタリング。

●鮮やかな印字が可能です。

●お手持ちのワープロで印刷した文字、イラストをこするだけできれいに転写できます。

レタリングリボン
タイプS／シャープ書院　価格＝ 900円
タイプW　価格＝1,100円
タイプEW　価格＝1,400円
カラー：共に黒・赤・青・緑・金・銀

転写式修正テープ『インスタライト』



●消した上からすぐに書き込めます。

●修正面がフラットで書きやすい。

●ワープロ、コピー、ファックス、手書きの修正に最適です。

●コピーやファックスをした場合、修正個所に影が出ません。

寸法：テープ巾5mm×長さ7m　色：ライトグレー
価格：500円

■テープの色を官製はがきに合わせた「官製はがき用」も取り揃えております。

寸法：テープ巾5mm×長さ7m　色：ブルーグレー
価格：500円

転写技術のパイオニア

フジコピアン株式会社

本　社　〒555 大阪市西淀川区歌島四丁目8番43号
TEL. (06) 471-7071（代表） FAX. (06) 474-7045
東京支店　〒135 東京都江東区木場二丁目17番13号亀井ビル
TEL. (03)3642-0333（代表） FAX. (03)3642-0588

hhc
ヒューマン・ヘルスケア企業
Eisai
エーザイ

一日いれば、くすり博士。

いつの時代にも、どこの国でも、薬は「いつも健康で、長生きしたい」「早く病気をなおしたい」という願いをこめて生み出され、医学とともに進歩してきました。

その薬の歴史を物語る貴重な資料がわかりやすく展示され、だれでも自由に見られるのが「内藤記念くすり博物館」です。

岐阜県川島町のエーザイ川島工園の中にあり、展示や映像や付属薬用植物園などを楽しく見ているうちに、薬に関するいろいろなことを学ぶことができます。

入場無料・月曜日は休館です。

エーザイ川島工園は、自然林を残した約14万坪の敷地の中に製剤工場や研究所や博物館などの建物が点在しており、公園のような工場なので「工園」と名付けました。

内藤記念くすり博物館

〒501-61　岐阜県羽島郡川島町
☎　058689-2101
エーザイ川島工園内

著作権

昆虫学評論および”ねじればね”に掲載された著作は原則として本会に属する．

1.. 執筆者自身が自分の著作の一部を複製・翻訳などの形で利用する場合，これに対して当会では原則的に意義申し立てしたり妨げることはしない．ただし，執筆者自身でも全文を複製の形で他の著作物に利用する場合に限り，事前に本会へ文書で申し出を行い，許諾を求めなければならない．

2. 第三者から論文の複製あるいは転載に関する許諾の要請があり，当会において必要と認めた場合は，執筆者に代わって許諾することがある．

投稿規程

1. 投稿は原則として当学会員に限る．登載は原則的には受領順によるが，全額実費負担の原稿は優先的に取り扱うことが可能である．但しアドバイサー制の導入により掲載の順位の変更がありうる（原稿は適当な方の校閲を受けたものであることが望ましい）．
2. 昆虫学評論には，当分の間，欧文原稿のみを掲載し，和文原稿は当面“ねじればね”に掲載されるものとする．但し原著には和文要約を付けることとする．またプレートは当分の間廃止し，図版はすべて本文内に収めるtext figure 扱いとする．但し著者負担によるカラー・プレートは認める．原稿の長さは刷り上がり10ページ以内とし，超過ページの印刷経費は著者負担とする．
3. 原稿（本文，図，表および表紙）は別記の要領で作成し，２部（一部はコピーで）を編集幹事に書留で郵送する．
本文をワードプロセッサーで作成した場合はDOSフォーマット化されたフロッピーに，またコンピューターで作成した場合はマッキントッシュまたはDOS-フォーマット化されたフロッピー（1.44MB）に，ストリップテキスト化した後それぞれ書き込んで，プリントアウトした原稿とともに同時に提出することが望ましい．フロッピーが提出されることによって校正や編集上の負担が著しく軽減される（当学会においてはマッキントッシュＬＣ６３０にワードパーフェクトを乗せて編集している）．その他の詳しい原稿作成の要領については別ページを参照のこと．
4. 原稿の掲載上の体裁については編集委員に一任されたい．編集委員はアドバイサーの意見に基づいて原稿の内容について著者に再検討や訂正を求めることがある．
5. 著者校正は原則として初校のみとする．校正での大幅な変更や追加は認めない．
6. 別刷は50部単位で作成し，50部を学会負担とする．
7. 原稿の送付，問い合わせ先は下記とする．

昆虫学評論，学会事務局
〒666-0116　川西市水明台３-１-７３　林　靖彦　Tel 0727-93-3712　Fax 0771-86-0863
ねじればね
〒611-0002　宇治市木幡熊小路１９-３５　水野弘造　Tel 0774-32-4929
〒614-8371　八幡市男山雄徳８　Ｅ７-３０３　伊藤建夫　Tel 075-983-3491
学会本部・担当
〒546-0034　大阪市東住吉区長居公園１－２３　大阪市立自然史博物館・初宿成彦
Tel 06-6697-6221　Fax 06-6697-6225　E-mail: shiyake@mus-nh.city.osaka.jp

和文原稿について

和文原稿は，原著に付ける和文要約を除いて，当分の間“ねじればね”誌上にのみ掲載の予定であるので，新しい分類学的処理を含む内容の論文の掲載は出来ません．“ねじればね”は年２回以上の発行として，１号６－１２頁建てとする．分布，生態などの短報，分類学的な解説やノート，同定の手引き，その他役にたつ論説，情報など幅広い内容で紙面を作っていきたいと考えています．

昆虫学評論　Entomological Review of Japan
第５４巻１号　Vol. 54, No. 1

平成１１年６月３０日発行
Published on June 30, 1999

会費納入振替口座：００９９０－８－３９６７２

発行者　林　靖彦
発行所　日本甲虫学会
〒５４６-0034　大阪市東住吉区長居公園１－２３
大阪市立自然史博物館
印刷所　ナニワ印刷株式会社
〒５３０-0043　大阪市北区天満１-９-１９

CONTENTS　第５４巻１号　目次

KISHII, T.: A New Species of the Genus *Ampedus* DEJEAN (Elateridae, Coleoptera) from Wakayama Prefecture. Some New Forms of Elateridae in Japan (XXIX) ······ 1
KISHII, T.: A Study on the Elaterid Beetles of SHIBATA Collection from Taiwan, VII (Coleoptera, Elateridae) On the Subfamily Elaterinae: Tribe Dicrepidiini ······ 5
KISHII, T. & S. JIANG: Notes on the Chinese Elateridae (Coleoptera) (4) ······ 11
KISHII, T.: A New Subspecies of *Homotechnes motschulskyi* (FLEUTIAUX,1902) (Elateridae, Coleoptera) from Tochigi Prefecture. Some New Forms of Elateridae in Japan (XXX) ······ 21
HAYASHI, Y.: Notes on the *Eucibdelus* Group of the Staphylinidae (Coleoptera) from Asia, 4. Description of *Paraphytolinus sumatrensis* gen. et sp. nov. from Sumatra ······ 25
OCHI, T., Y. MIYAKE & Y. KUSUI: A New Subspecies of *Onthophagus carnarius* (Coleoptera, Scarabaeidae) from Miyakojima Is., the Ryukyus ······ 35
OCHI, T. & S. HORI: A New *Trox* (Coleoptera, Trogidae) from Amami-Oshima and Okinawa Islands, the Ryukyus, Southwest Japan ······ 37
ITO, N.: Six New Species of the Trichotichine Subgenus *Amaroschesis* from Sichuan, China (Coleoptera: Carabidae: Harpalini) ······ 43
MORIMOTO, K.: A new species of the genus *Trigonorhinus* from Japan (Coleoptera: Anthribidae) ······ 60
SAWADA, H. & J. WIESNER: Records of Tiger Beetles collected by Mr. CAROLUS HOLZSCHUH in Laos ······ 65

Errata and Corigenda ······ 34
原稿作成の要領 ······ 79
会 告 ······ 80